

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLVIII.

SATURDAY, JANUARY 2, 1886.

NO. I.

ORIGINAL LECTURES.

ON LOCAL ANÆSTHETICS.¹

A Clinical Lecture, delivered in Cochin Hospital.

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GENTLEMEN: In the present lecture I propose to consider the new anaesthetics, and omitting altogether surgical anaesthesia in its various bearings and uses, which would require a whole course of lectures, I shall take up only one of the minor aspects of the question, and discuss the subject of local anaesthesia, which presents no little interest at the present day.

For a long time clinicians have sought to diminish or abolish the sensibility of the skin in regions where the minor surgical operations, such as simple incisions of the skin and cellular tissue, were to be performed. This was considered the more desirable, inasmuch as grave accidents sometimes attended the first attempts at general anaesthesia. One of the means most employed was cold.

It was, in fact, known that when cold strikes the exposed parts of the body it produces numbness and insensibility, and practitioners had recourse not only to local applications of ice, but also to refrigerant mixtures. Hence it was that James Arnott, of Brighton, many years ago, advised the combination of ice and common salt, and Adolph Richard, that of sal-ammoniac, salt, and ice.

One may also obtain this local anaesthesia by the rapid evaporation of volatile substances, such as ether, and Simpson was one of the first to counsel this mode of refrigeration. I remember to have seen, thirty years ago, at the commencement of my medical studies, a very ingenious apparatus, made according to the plan of Prof. Richet, which consisted in a pair of bellows over which was placed a reservoir of ether; as fast as the stream of ether was projected on the exposed surface of the skin, it was volatilized by the blast from the bellows. This apparatus, which was rather cumbersome, was advantageously replaced by Richardson's spray producer, of which we make use at the present day.

The atomization of ether as a process of local anaesthesia possesses great advantages over the local application of ice or refrigerant mixtures; nevertheless, these sprays are not free from the other inconveniences of refrigeration. Cold does, in fact, abolish sensibility, but during the application of the cold the pain is quite keen and when the anaesthesia has disappeared, the pain returns more pungent than before, so that if one suffers but little during the operation, the after-effect is quite

painful; moreover, the reaction is sometimes followed by profuse hemorrhage. These are disadvantages which limit the usefulness of local anaesthesia by cold.

Other liquid substances have been substituted for ether, such as rhigolene, by Bigelow, of Boston, and Delcomenete, of Nancy, a few years ago, advised carbon disulphide as means of local anaesthesia. I have myself been much interested in this subject of the local uses of bisulphide of carbon. This chemical, by reason of its extreme volatility, produces refrigeration of the tissues, but this refrigeration is rapidly followed by such intense rubefaction, that carbon disulphide ought rather to be considered a rubefacient of the first order, superior in many respects to mustard sinapisms, than as a local anaesthetic. It has also been proposed to employ certain gases for the production of local anaesthesia, and it is for this purpose that carbonic acid was recommended as early as 1772 by Percival. In 1856 Simpson again took up this means of local anaesthesia, improving the apparatus for its production, and it was then quite a common thing to see local douches of carbonic acid used in the hospitals of Paris, though rather for analgesic than for anaesthetic purposes; they were used chiefly to relieve the pains caused by cancer of the uterus. We have even seen this gas used in the treatment of neuralgias at the thermal stations, where are found waters highly charged with carbonic acid, as at St. Nectaire. Finally, in 1883, my friend, Dr. Campardon, following the ancient practice of Percival and Simpson, applied carbonic acid to the treatment of whooping-cough.

Thanks to the acknowledged anaesthetic properties of carbonic acid, it abolishes the exaggerated sensibility of the glottis, and thereby lessens the fits of coughing in pertussoid patients. The means employed by Campardon is very simple: it consists in utilizing the well-known soda water siphon bottles—the bottles which are in use for this purpose are destitute of tubes dipping into the liquid, and only the liberated gas issues from the mouth of the bottle. A rubber tube adapted to the siphon, and which the patient takes between his lips, conveys the gas into his mouth; the child makes a few inspirations, and Dr. Campardon affirms that by this means he has seen the paroxysms rapidly diminished. But I come now to a mode of local anaesthesia of much more recent date, and which is destined to render us great service; I refer to coca and cocaine.

From time immemorial, the Peruvians have made use of the leaves of a shrub belonging to a family of Erythroxylaceæ, the *Erythroxylon coca*. In their estimation, this leaf has multiple remedial properties, and, according to the statement of Dr. Beugnier-Corbeau, "the sacred plant of the Incas was a promise of life to the moribund who could drink its sap; an uncomparable viaticum to the traveller whose hunger it appeased; a cordial to raise the forces and revive the senses benumbed by the cold of the rugged winter; a source of sweet forgetfulness to the man harassed by chagrin;

¹ Translated, from advance sheets, by E. P. Hurd, M.D., of Newburyport, Mass.

and a joy-producer to him who would taste the pleasures of love."

When, twenty years ago, or a little more, it was proposed to introduce coca into therapeutics, it was chiefly its tonic and excitant properties which were vaunted; and you will find in the thesis of Damarle, and in the writings of Reis, indications relative only to these tonic properties.¹ However, in 1860, Niemann had discovered in the leaves of coca a crystalline alkaloid having for its formula $C_{17}H_{21}NO_4$, to which he gave the name of *cocaine*; and, two years afterward, Walker and Lossen found another active principle, of syrupy consistence, having a very marked ammoniacal odor, to which they gave the name *hygrine*.

These chemical discoveries added nothing to our knowledge of coca till Koller made known, on the 16th of October, 1884, to the Medical Society of Vienna, the marvellous anaesthetic action of cocaine on the mucous membrane of the eye. You remember how great was the astonishment, and what incredulity was manifested; but soon the facts which Koller had announced were confirmed all over Europe. Abadie and Darier, Troussseau, Panas, and all the ophthalmologists in France, showed the great advantages which might be obtained in ocular therapeutics from the discovery of Koller, and the anaesthetic properties of cocaine were henceforth everywhere recognized. By what train of ideas was Koller led to make this grand discovery, which constitutes an epoch in the therapeutic history of this century? And how is it that coca, from being the tonic and waste-restraining medicament which it once was, has been transformed into a local anaesthetic? The history is so strange that you will allow me here briefly to relate the points of interest.

Morino y Maiz,² in his thesis of 1868, on cocaine (which, by the way, was the first that was ever written on this alkaloid), made mention of the following fact: "In large doses, cocaine produces in animals diminution, then annihilation, of sensibility, without motility being completely abolished; in all cases the pupil remains dilated."

In 1870, Gazeaux gave expression to certain doubts respecting the tonic and waste-restraining properties of coca, and thought that this medicament might act by allaying the sense of hunger and thirst through its anaesthetic effect on the lingual and gastric mucous membranes.

In fact, physicians who were engaged in treating affections of the larynx had noticed this special anaesthetic action of coca; and Fauvel, since 1869, was in the habit of using coca in laryngeal diseases.

In 1877, Saglia insisted anew on the advantages to be derived from the sacred plant of Peru in painful affections of the pharynx, and this anaesthetic action was so well shown that, in 1881, Du Cazal,³ at the Medical Society of the Hospitals, thus expressed himself *a propos* of a case of tuberculous ulceration of the larynx presented by our colleague, Millard: "The tincture of coca is an excellent medicament with which

to obtain anaesthesia of the pharynx, and to produce such anaesthesia it is only necessary to paint the mucous membrane with the tincture." Gougenheim,⁴ in 1882, when writing of the local treatment of the laryngites, said: "The extract of coca, diluted in water, so as to form a very concentrated solution, produces a veritable sedation; I do not know the cause of this therapeutic action."

Moreover, the physiologists, on their part, did not remain inactive, and, in 1880, Von Anrep spoke of the pupillary dilatation, but had not observed the state of the mucous membranes. The following year, Couvard and Laborde noticed the anaesthetic action of cocaine. Unfortunately, their experiments remain incomplete, and the results have not been published.

Hence, then, gentlemen, as you see, what led Koller to his discovery was the knowledge of the local anaesthetizing properties of coca on the lingual and pharyngeal mucous membrane; he thought, and rightly, that all the mucous membranes must respond alike to the action of this medicament; and since then we have been able to add that even the skin submits to this anaesthetic action. It is unfortunate that the discovery of the local anaesthetic properties of cocaine was not followed up in France, where there had been so many investigations on this subject, and where, fifteen years before, the anaesthetic action of coca on the pharyngeal mucous membrane had been pointed out.

When you put in contact with a mucous surface a two per cent. solution of hydrochlorate of cocaine, you obtain, at the end of from five to ten minutes, loss of sensibility of the mucous membrane, and this effect lasts an hour or two. The anaesthetic action does not seem to exhaust itself by habit—that is to say, a second and third or any future application is as successful as the first. The same insensibility is produced when the cocaine is introduced under the skin, and in the experiments made under our direction by Dr. Paul Compain, and which you will find described in his inaugural thesis,⁵ I studied thoroughly the anaesthetic action of hypodermic injections of this alkaloid.

You see before you a patient on whom we are about to experiment: we pinch up a fold of the skin of the forearm and inject twenty drops of a two per cent. cocaine solution. This injection, as you may see, does not cause any painful sensation. If in the course of five minutes, we explore the sensibility of the skin over the point of injection, this is what we shall observe: the sense of touch is obtunded, and the patient tells us that he feels as if the skin over that place were covered with a thick layer of wadding. The consciousness of painful impressions is abolished, and we may with impunity scratch or prick the part with a needle; the patient has over this region only the sensation of contact of a foreign body. This anaesthetic state of the skin is produced in only a very limited zone, which exactly corresponds with the portions of the derm which have been directly in contact with the solution of cocaine, and in our patient it represents a circular space of about an inch and a half in diameter. This complete anaesthesia of the skin lasts about twenty minutes, then disappears

¹ Damarle: On Coca, Thèse du doctorat, 1862. Reis: On the Use of Coca, Bull. de Thér., 1866.

² Morino y Maiz: On Cocaine, Thèse de Paris, 1868.

³ Saglia: On Coca: its Therapeutic Applications, Gaz. des Hôpitaux, May, 1887. Du Cazal: Compt. Rend. de la Soc., 1881, p. 283.

⁴ Gougenheim: Local Treatment of the Laryngites, Soc. de Thér., 1882.

⁵ Paul Compain: Contribution to the study of hypodermic injections of hydrochlorate of cocaine, Thèse de Paris, 1885.

little by little, and an hour after, there remains but a trace of the anaesthetic phenomena.

May these hypodermic injections be accompanied by general symptoms? Yes, in certain cases. In the first researches which were made in our laboratory by Drs. Bardet and Meyer, these experimenters affirmed that they had felt such general effects as, first, a marked dilatation of the pupil, coming on half an hour after the injection, then syncopal symptoms, so intense that one of them completely lost consciousness and fell on the floor—his face was pale and his pulse imperceptible; these symptoms returned whenever he assumed the erect posture.

Since then we have observed the same symptoms in a number of our patients. One of these was a woman on whom we wished to practise forcible dilatation of the anus; we injected around the margin of the orifice a syringeful of a two per cent. solution; there supervened syncope, nausea, and curious twitchings of the alæ nasi.

I was recently consultant in a case in which I had ordered subcutaneous injections of cocaine, to combat a vehement intercostal neuralgia. The attending physician wished to experiment on himself with the same injection, after having administered it to the patient. In both of them there were very pronounced symptoms. The physician experienced an attack of syncope, while the patient had very strange sensations; he felt, he said, extraordinarily light, and he seemed to himself to be lifted up into the air like a balloon.

In all these cases the injections were practised with a two per cent. solution, and the dose did not exceed from one to two cubic centimetres. I must add that, in all these instances, the patients were standing or sitting, which postures would be likely to favor syncopal attacks. Hence it is that, since I have taken the precaution to make the patient lie down whenever I have administered the cocaine injection, these phenomena have not occurred.

To what causes must we ascribe these effects? Probably to the cerebral anæmia produced by the action of cocaine upon the vasomotor nerves; in fact, besides the considerable part which the dorsal position plays in the appearance or non-appearance of the general effects of cocaine, it is noteworthy that these general symptoms are the more likely to supervene, the more anæmic the patient is, and that they are inconspicuous when the patient is strong and vigorous. Hence it is that Dr. Compain has never seen such accidents produced as the result of the numerous injections which he has made on himself. Moreover, when experiments are performed with cocaine on animals, and particularly on the monkey, such as Prof. Grasset and Dr. Henri Negre have made, there appear convulsive phenomena characterized by attacks of clonic spasm, and this happens when the dose is reached of six cubic centimetres of a two per cent. solution.

Moreover, cocaine has an evident action on the temperature, which it raises; it is, therefore, a hyperthermic agent. This action, however, is very variable, according to the kind of animal experimented on; for, while cocaine raises the temperature in the dog, it lowers it in the monkey. In fine, my pupil Dr. Rigolet has noted *de visu* the modifications effected in the capillary system by the action of cocaine. Several drops of a one per cent.

solution determine in the frog, at first a dilatation, then a contraction of the capillaries; and Rigolet considers this alkaloid a powerful vaso-constrictor. These experiments give us a physiological explanation of the general symptoms which in man are determined by cocaine.

However, thus far these accidents of a toxic kind have never presented any gravity, and to determine such constitutional effects it is necessary to employ pretty large doses. Thus, Rigolet has been able to inject, without any harm, 40 centigrammes in the veins of a dog weighing 18 kilogrammes. Likewise, Bignon, of Lima, has observed that the Indians can absorb as much as 40 centigrammes of cocaine in chewing the leaves, without experiencing any toxic manifestations.

Ordinarily, to obtain anaesthetic effects, we make use of a two per cent. solution of chlorhydrate of cocaine. According to the researches which I have made, the increase of the anaesthesia is not proportioned to the increase of dose, so that we may adhere to this two per cent. solution with the certainty of experiencing the desired results.

In certain cases we may employ pomades of cocaine, and in the preparation of these it is not necessary to transform the cocaine into a hydrochlorate. Bignon, of Lima, has, in fact, shown us that the alkaloids of coca are soluble in unctuous substances of mineral origin, such as vaseline; the dose here is the same as in the case of the solutions; finally, one can have recourse to preparations made from the plant itself. Delpech, in particular, has made an extract of coca according to the method of the American Pharmacopœia—that is, by evaporating the alcohol, and which is said to render good service in affections of the pharynx.

Before undertaking the consideration of the action of coca and its therapeutic applications, I desire to say a few words about its cost.

When Koller's discovery was first made known, cocaine readily brought a very high price, and this was the first drawback to its general use. I have, in fact, known physicians, ignorant of this high cost, to prescribe gargles, lavements, and ointments, the price of which exceeded twenty dollars. To-day cocaine is sold at a much cheaper rate, and you can find in our drug stores cocaine of impure quality, though still pure enough for all anaesthetic purposes, save in ophthalmic surgery, the price of which varies from four to six francs a grammme.

THERAPEUTIC APPLICATIONS OF COCAINE.

Cocaine is, as we have seen, a local anaesthetic of the mucous membrane and the skin. To begin with the subject of the production of cutaneous anaesthesia, it is necessary, in order that the cocaine may act, that it be applied to an abraded surface, or introduced under the skin. I have never obtained the least effect from the prolonged contact of cocaine with the undenuded skin, whether the alkaloid were rubbed over the derm in the form of concentrated solutions, or in the form of ointment.

When the skin is deprived of its cuticle, and cocaine is applied, the latter has a very marked anaesthetic action, and you can derive advantage from this property in the treatment of *burns* where solutions or pomades of this alkaloid at once dissipate the atrocious pain which accompanies burns in the first and second degrees. You

will obtain the same analgesic effects in the case of cracked nipples, so common in nursing women, and Audhoui has reported interesting instances of this kind. In certain pruriginous affections of the skin, moreover, cocaine may be used to allay the tormenting itching.

Administered under the skin, two per cent. solutions of cocaine enable us to perform, without pain, a great number of minor operations. It is with the help of this local anaesthetic that I now practise pleurotomy, and that I secure for the patient exemption from the pain of the first stage of the operation. To attain this result, I inject at both extremities of the line which my bistoury has to traverse a syringeful of a two per cent. solution of hydrochlorate of cocaine.

You may in this way, without pain, open a superficial abscess, or extirpate a lupus; the pain of incising a felon is much mitigated; by the help of cocaine, tracheotomy is robbed of half its terrors; and, in short, you will derive advantage from the local use of this alkaloid in all instances where the incision of the skin is the chief element of pain. In all these cases the local anaesthesia by cocaine is far superior to that produced by cold. Remember that you should always operate with the patient in a recumbent posture, to avoid the vertigo which might ensue, and you should wait ten minutes, at least, after the subcutaneous injection before proceeding to the incision of the skin.

By the aid of cocaine I have operated for phimosis, but if you are not very careful you will have difficulty in approximating the skin and mucous membrane with your *serre-fines* by reason of the artificial oedema produced by the injection of the cocaine solution in the cellular tissue of the prepuce.

I come now to the applications of cocaine to the affections of mucous membranes. I will omit what pertains to the ocular mucosa, this being the special province of the ophthalmologist, and I will consider rapidly the benefits derivable from cocaine in affections of the mucous membranes, commencing with the digestive tube.

The buccal and pharyngeal mucous membranes are readily and rapidly anaesthetized by cocaine. In operations on the pharynx, epiglottis, and larynx, generally so painful, you may make applications of this alkaloid, and you have often seen in my service tuberculous patients who could scarcely swallow a mouthful, enabled henceforth to eat by reason of relief from suffering obtained by the repeated use of solutions of this charming local analgesic. You all doubtless remember the case of the late General Grant, and the comfort which he obtained the last few months of his life from cocaine.

In the cases of which I have just spoken, the throat is painted with a strong solution of cocaine a few minutes before a meal, and the local anaesthesia lasts about three-quarters of an hour, giving ample time for the repast.

By means of these local applications of cocaine such operations as staphylorrhaphy are facilitated, and laryngoscopic examinations are rendered comparatively easy. It is also a good plan, in order to avoid the pain of amygdalotomy, either to inject a little cocaine into the tonsil, or, as Lermoyez advises,¹ to paint the tonsil over

several times with a two per cent. solution before resorting to the operation. Moreover, the painful period in the performance of lavage or "gavage" of the stomach due to the contractions which take place in the isthmus of the fauces, may be obviated by painting with cocaine, and I have been careful to resort to this means whenever patients have experienced difficulty in the introduction of the stomach-tube.

But the anaesthetic action, so local and superficial, of cocaine can be of no service in toothache or in the extraction of teeth; on this point all the best dental surgeons, such as Galeppe and Magitot, are agreed.

Certain diseases of the cesophagus, such as spasmodic stricture, are tributary to the action of cocaine, which may be applied by means of the sound, or by causing solutions to be swallowed.

As for disorders of the stomach, such as spasmodic affections of this organ with incoercible vomiting, cocaine may sometimes render marked service. Certain perversions of the stomach, and especially boulimia, are also amenable to cocaine, as Beugnier-Corbeau has shown. It is even certain that were cocaine to be bought at a reasonably low price, so that it could be afforded, one might use it to advantage in treating the agonizing pains which attend ulcer and cancer of the stomach, and this might be done by bringing solutions of cocaine directly in contact with the lining membrane of that viscus by means of the siphon tube.

The great benefit which we have derived from the anaesthetizing properties of cocaine in painful affections of the upper part of the digestive tube, has furnished us with indications for its use in certain anal affections. Obissier was one of the first to make application of this remedy in cases of anal fissure.¹ Before effecting dilatation of the sphincter, he procured complete local anaesthesia by making at two opposite points, just at the margin of the orifice, interstitial injections of two-thirds of a grain of cocaine.

You have seen me have recourse, and successfully, to the same means, and I have been able in the case of one of our patients affected with fissure of the anus, to perform forced dilatation without pain by the help of these subcutaneous injections. These injections must be made around the sphincter, and I used in the case at which you were present, four injections of a syringeful of a four per cent. solution. Lotions do not suffice, as the unsuccessful trials of Dr. Clemente Ferreira testify.²

You can also have recourse to cocaine in cases of painful hemorrhoids, and you may here employ suppositories containing one-third of a grain. So much for the mucous membrane of the digestive tube; we will now pass on to that of the genito-urinary organs.

It was in this hospital that one of the first applications of cocaine to the treatment of vaginismus was made. It concerned a patient in the service of our colleague Anger, and who had not been benefited by forced dilatation under chloroform. A few swabbings with a solution of cocaine, made by my interne Lejars, rendered examination easy, and removed all pain and spasm,

¹ Obissier: Note on the Employment of Cocaine in Fissure of Anus, Bull. de Thér., t. cviii. p. 10.

² Clemente Ferreira: A case of fissure of the anus treated without success by hydrochlorate of cocaine, Bull. de Thér., t. cix. p. 216.

¹ Lermoyez: Anæsthesia by Cocaine in Amygdalotomy, Bull. de Thér., t. cviii. p. 108.

and thereafter made sexual approaches possible, as the husband of this woman testified some weeks afterward.¹

Almost at the same time Cazin reported to the Society of Surgery a similar case, and since then facts have so multiplied that we may now say that if cocaine does not cure vaginismus, it at any rate greatly alleviates this painful affection in rendering sexual relations possible by the help of inunctions or lotions of this alkaloid.

Gynecology has even gone further, and by subcutaneous injections and swabblings of the neck of the womb, Doleris has maintained that we may to a certain extent mitigate the pains of childbirth.

The urethral mucous membrane is also advantageously modified by the salts of cocaine. I have derived great benefit therefrom in practising cauterization of those painful vegetations which form around the meatus urinarius in females. Guyon has employed cocaine with good effect in the male, to relieve the pain and spasm accompanying catheterism.

Finally, the respiratory and nasal mucous membranes have also derived advantage from this anesthetic action, when it has been a case of the extraction of polypi from the nose or the application of caustic solutions to the larynx. At the same time, it is necessary to bear in mind the paralyzing action of cocaine; and in a case described by Ayssaguier, grave asphyxiating phenomena were seen to follow painting the larynx with this alkaloid. In fine, to complete the subject, I must tell you that otologists have also utilized cocaine in the treatment of affections of the ear.

To sum up, whenever you desire to obtain an anesthesia of the skin and mucous membranes which shall be complete, temporary, and of little extent, you may utilize cocaine. Are there other substances capable of producing local anesthesia of the tissues? This is a question which the future alone can decide. For my part I have tried caffeine, and if it diminishes the sensibility of the conjunctiva, it does this very imperfectly. It has been claimed that menthol has the same effect, but the trials which I have made with this substance have not given me any satisfactory result. Cocaine remains, then, thus far the only local anesthetic of mucous membranes, and this fact renders the introduction of this alkaloid into medicine one of the most precious therapeutic acquisitions of this age.

Since I have spoken to you of hypnotics, allow me to finish this lecture by announcing the discovery by Dr. Bardet and myself of a powerful hypnotic.

Among the different products of the great aromatic series which we are studying at the present time, in their chemical constitution and therapeutic action, is found a mixed acetone, having for formula $C_6H_5COCH_3$; it is *phenyl-methyl acetone*, or *aceto-phenone*. This body had been already studied by Popof and Mencki, who observed that this acetone is transformed in the economy into carbonic and benzoic acids, and eliminated by the urine in the state of hippurates.

We have found in this acetone remarkable hypnotic properties; hence we propose to substitute for its compound name the shorter appellation of *hypnone*.

Administered to the adult in the dose of from two to four drops, hypnone causes sleep, and in the insomnia

determined by alcoholism its effects seem superior to those of chloral and paraldehyde.

When you inject under the skin of guinea-pigs fifty centigrammes to a gramme of hypnone in a state of purity, you determine insensibility, then a comatose state, in which the animal succumbs in the course of five or six hours. Hypnone is, as you see, a body which is liquid at the ordinary temperature, having a very strong odor which resembles that of cherry-laurel, and new-mown hay; it is not soluble in water, and therefore we have given it dissolved in glycerine and enclosed in capsules.

Our patients have not experienced any unpleasant effects from it, save always the disagreeable odor of the breath which results from the elimination of the hypnone by the lungs.

What future is in reserve for this hypnotic we do not fully know, but I thought it worth the while, in concluding, to allude to this discovery which results from researches in which most of you participated.

ORIGINAL ARTICLES.

HYSTERIA IN THE MALE.

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Hysteria is not susceptible of classification any more than is eclampsia or epilepsy. We must agree with Marshall Hall that it is not a feigned disease. It is real enough, but often exaggerated, and great difficulty sometimes attends the diagnosis.

In looking up the subject, I find very few cases reported in the male, especially in this country. Arnold,¹ Baily,² Beard,³ Free,⁴ and Smith,⁵ have each reported a case in the United States. A number of cases have been reported from abroad. Not being able to classify the trouble, it is probably as well to follow Niemeyer, and place it under the head of neuroses of unknown anatomical origin.

Hysteria was supposed to be due to disturbances of the uterus, both by the ancients and by modern physicians to the time of Sydenham. It is now recognized that it may be dependent on a variety of causes with which that organ has no necessary connection.

Morbid nervous symptoms may be of considerable extent without ascertainable lesion; on the other hand, cases looking like hysteria may be organic, and thus diagnosis is made difficult. Among predisposing causes, the inheritance of a nervous system predisposed to degeneration, the so-called neuropathic diathesis, is perhaps the most prolific. Mental and physical exhaustion, fright, and the depressing influence of injury, or general disease, are the most frequent immediate causes. The trouble is most apt to occur at about the period of puberty, but neither age nor sex gives immunity. The frequency of hysteria in females and males respectively is said to be as

¹ Baltimore Medical Journal, 1870.

² London Medical News, 1882.

³ Archives of Electrology and Neurology, 1875.

⁴ Medical Record, 1884.

⁵ Ibid., 1882.

¹ Dujardin-Beaumetz: A case of vaginismus treated with success by hydrochlorate of cocaine. Bull. de Thér., t. cvii. p. 489.

twenty to one (this is probably incorrect, as we shall endeavor to prove), which circumstance is important as showing the uterine influence, and it definitely places hysteria in the category of nervous affections. Certain races are said to be more liable to the disease than others. In Europe, for instance, the Latins and Slavs are more prone to suffer, and in our country the negro race is peculiarly susceptible to it. Whether the negro is more susceptible from mental weakness and consequent excitable nature, or whether he has an unexplainable tendency to the disease, just as he has to tetanus, we cannot say. If we bear in mind the fact that the majority of negroes are uneducated, we are better prepared to accept the theory that the negro has inherited through generations the superstitious nature of some of the African tribes.

Occupation, or rather the want of it, is a prolific cause, and noticeable in all classes of society. We are led to believe, by prison authorities, that the vicious and depraved are more liable to paroxysms of a hysterical nature, and that among the inmates of such institutions it occasionally assumes an epidemic form.

Religious excitement exerts a similar influence. I have known as many as from twenty-five to fifty negroes of all ages and both sexes attacked in the course of an evening, during one of their "revivals." At such times a bucket of cold water brings them around very quickly.

The dancing mania of the middle ages so graphically described by Hecker,¹ was, I take it, only an epidemic form of hysteria, though the author stoutly denies this.

In point of duration, hysteria may be either transient or chronic, and lastly may end in absolute ma-

involved. Hemiplegia (I have seen one such case with aphasia, in a female, lasting for months), paraplegia (I have seen one such case strongly simulating spastic spinal paralysis), and sometimes complete paralysis (Case V.) also occur.

Tendon reflexes are usually not under voluntary control, but nature seems to play tricks here also.¹

CASE I. *Violent hysteria in a male.*—Some time since, in the early fall, I was called about 4 A. M. to see Tom, a colored male, 21 years of age, stout, and previously in perfect health. He complained of intense pain in the stomach, and a few minutes after I saw him in a violent convulsion (Fig. 1). Ball of eye was fixed and turned up, muscles rigid, thumbs flexed on palms, breathing interfered with, but *glottis not closed*. Convulsion lasted a minute; he then complained of pain again; pulse 70, strong and full; temperature normal; abdomen tense; convolution repeated in a few minutes. My first thought was strychnia poisoning, but I found on inquiry that this could not be the case, as he rested well all night. Acute indigestion and tetanus both occurred to my mind, but the absence of any wound and the clonicity of the convulsions put aside tetanus. Then I decided to treat him for cramp colic; administered a full emetic of ant. et pot. tart. and ipecac, and had him drink copiously of warm water. Nothing was ejected from the stomach except the water drunk. An injection per rectum brought away flatus and very little feces. Had another convolution. His mind was perfectly clear, and he told me he had been "conjured" on the previous Sunday evening by an old negress who had a spite against him. The spell was to work in three days, and, true as the needle to the pole, his imagination brought it in on time.

FIG. 1.



Convulsive position; muscles in clonic contraction.

nia. In the first phase it consists of an emotional explosion, and, ordinarily, at the same time the cesophagus contracts spasmodically from below upward and produces the feeling of a ball in the throat—"globus hystericus." Closely related to this, is spasmotic contraction of the diaphragm, giving pain at the pit of the stomach, spasmotic action of several groups of muscles which operate in producing complex acts, as laughing, crying, etc.; spasmotic contraction of the rima glottidis, and tension of the vocal cords, giving rise to hysterical cough; and pseudo-paralysis, in which a single extremity is

Recognizing now that I had a case of hysteria to deal with, I determined to take my time and make some observations, which I did. He had several more convulsions in the space of an hour, after which I passed a catheter and drew off about a pint of limpid urine. Ordered full dose of chloral and bromide of potassium, after which the convulsions ceased, and he slept. Ordered him ten grains of calomel to be given in a few hours.

Thursday morning, about the same hour, I was called and found him in most violent convulsions. He

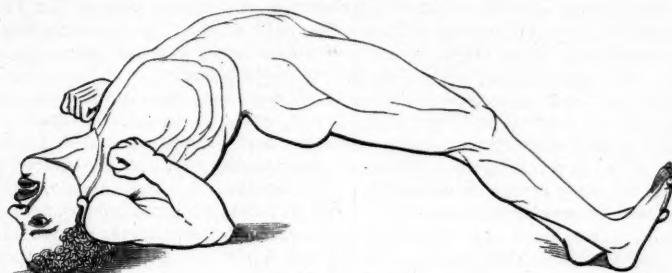
¹ Humboldt Library, August, 1885.

¹ MM. P. Marie and Souza-Leite: *Revue de Médecine*, excerpt in *Brit. Med. Journ.*, Aug. 22, 1885, p. 353.

had apparently done well after my visit on Wednesday. The calomel had purged him freely. I now gave him full doses of the emetics, in order to make him too sick to have convulsions. In fifteen minutes the contents of the stomach were ejected, but the convulsions continued. At this time the skin was very hyperesthetic; the convulsions were clonic, but, at times, the muscles would remain as hard as a stone for fifteen or twenty minutes; the contour of the temporal and masseter muscles stood out in bold relief, the

liver, educated, and no bad impulses, except a desire for women. Married, and father of six children. General nutrition good. Father, an alcoholic; one sister and one brother suffered from nerve troubles. At the time when I first saw him suffering from hysterical troubles, he was laboring under strong mental excitement; his child was dangerously ill with the croup, and I had just done a tracheotomy; the sufferings of the little one and the sight of blood were too much for him. I heard a noise, and, turning,

FIG. 2.



Condition of opisthotonus.

angles of mouth were drawn outward, the lips apart, teeth clinched. During the convulsions he underwent very peculiar contortions, and opisthotonus developed (Fig. 2); eyes were fixed and protruding, brows wrinkled. It would occasionally require the combined strength of two men to hold him on the bed. In the interval his mind was perfectly clear, he talked rationally, laughed, sung, and prayed. He insisted that medicine would do him no good, for he was "conjured." I had resorted to the bromide of potassium, and, during the day, gave him exactly one ounce, none of which was ejected, but it failed to control the convulsions. Occasionally I anæsthetized him, which, of course, kept him quiet for the time. He had twenty-seven convulsions in twelve hours, some of which lasted half an hour.

About 5 o'clock in the evening I "suggested" to him that I would work a counter-spell and cure him.

I saw him shaking and jerking, and an assistant helped him to lie down. His whole form was convulsed, and his body underwent a variety of contortions, the most peculiar of which is illustrated by Fig. 3. He had several convulsive attacks at intervals of half an hour. The trouble readily yielded to treatment.

I learned, upon inquiry, that he had had similar attacks before, and subsequently I treated him for the same trouble. At times he is free from these attacks from six months to a year, but violent excitement almost always brings them on. Sometimes he did not have attacks, but displayed the ordinary phenomena of laughing, crying, etc.

The visual field of this patient was contracted; hearing, smelling, and taste were obtunded. Hemianæsthesia to heat; the tendon reflexes were normal; he suffered occasionally from insomnia.

FIG. 3.



Convulsive position; legs and arms extended.

I then gave him a hypodermic injection of morphia. He had never before seen a hypodermic syringe, and it produced a strong mental impression. He then had only one slight convolution, after which I repeated the injection into the arm (using very little morphia both times), and he had no more convulsions. He was well the next day, except soreness of the muscles. Occasionally he displays hysterical tendencies, but his health remains good.

CASE II.—G. M., white male, age 40 years, intel-

I saw also a brother of this man, who for two months lay in bed, making no attempt to get up, neither would he speak, but lay with eyes protruding and pupils dilated (except when asleep); he made no attempt to turn himself in bed, but would allow others to handle him without resistance. He only ate food or took medicine when it was put in his mouth. No lesion was discoverable, and he made a perfectly good recovery. This case I saw in consultation, and I believe it has been reported.

CASE III. *General hysterical hyperesthesia in a male aged fifty years.*—I am at liberty to give only general symptoms in this case.

Other members of the family had suffered from nervous trouble. His sister was hysterical, and occasionally suffered with excessive hyperesthesia. Patient's wife had suffered similarly, which fact seemed to make a strong mental impression on him. Personally he was strong, well built, decided tendency to obesity, had always enjoyed good health, except occasional rheumatism in ankle-joint. When I saw patient he was under treatment for felon of finger: there was apparently no other lesion, but he would complain greatly if any one touched him, and if a hand was laid upon his leg or thigh, he would yell most lustily. He kept this up several days, never being touched without hallooing. To test him, the physician in attendance and myself discussed the feasibility of applying the actual cautery to his back and feet. This conversation was conducted where he could hear it. One of us would seemingly demur, saying it would be very painful, etc.

At our next visit, twelve hours later, he allowed us to handle his limbs without complaining. Expressed himself as being much improved, and in a few days the hyperesthesia disappeared, and he was up and went home, a distance of fifty miles. The travel on the railroad did not unpleasantly affect him.

CASE IV. *Ordinary hysteria in white male, aged twenty-five years.*—I was well acquainted with the history of this young man, and knew that he had been recently disappointed in love. When I saw him he was inclined to be affectionate and wanted to embrace me. As I declined the proffered honor, he became very angry and began to cry, then to laugh; later he became very much depressed and wanted chloroform, with which to commit suicide; he tried several times to throw himself out of the window, talked incoherently, and cried and laughed constantly, had convulsive movements, but no defined aura. This, with a variety of silly acts, continued for twenty-four hours. Patient was temperate, healthy, and ordinarily intelligent.

CASE V. *Complete paralysis, with aphasia in colored man, aged thirty-eight years.*—I recently saw in consultation with Dr. Pate, of this city, a man who had previously enjoyed good health. He was apparently completely paralyzed and could not talk. His pupils and tendon reflex were normal, neither hyperesthesia nor anesthesia present. Patient entirely recovered both voice and use of limbs in a few days, and seems to continue in good health.

The cuts were taken from life, by my brother, Dr. M. C. McIntosh, who saw the cases.

MEMPHIS, October 15, 1885.

PRELIMINARY NOTE ON ADONIDINE.

BY J. C. WILSON, M.D.,

PHYSICIAN TO THE PHILADELPHIA HOSPITAL AND TO THE HOSPITAL OF
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THE *Adonis vernalis*, a plant belonging to the natural order Ranunculaceæ, and indigenous in Southern Europe, has long been empirically used in

Russia in various affections, and especially in diseases of the heart. Rubnow, of St. Petersburg, in 1879, first made the medicinal properties of this plant the subject of special research. In 1882, Cervello, of Strasburg, succeeded in isolating its active principle. The results of his investigations were published in the *Archives Italiennes de Biologie*, toward the close of the same year. From this date the remedy excited much interest among the physicians of Russia and Germany. In 1884, Lesage¹ made public the results of physiological studies concerning its properties, conducted in the clinical laboratory of Germain Sée, at the Hôtel Dieu. Quite recently Durand,² at the suggestion of Desplats, has made a careful clinical study of the therapeutic action of this substance.

The older preparations were made from the root and leaves of adonis. Rubnow employed an infusion and maceration of the leaves, and an extract has also been used. The active principle of these preparations is the glucoside, isolated by Cervello. This substance is amorphous, colorless, without odor, intensely bitter, slightly soluble in ether and water, and freely so in alcohol. Rubnow employed the leaves in infusion of a strength of 4 to 8 parts to 180 parts of water. The dose of this preparation is a tablespoonful every two hours. Durand employed the glucoside in pills of 0.02 centigramme (one-third grain) each, and rarely exceeded this dose.

The physiological effects are analogous to those of digitalis. Cervello, experimenting on frogs, found that 15 milligrammes (one-fourth grain) were sufficient permanently to arrest the heart. According to him, adonidine should be employed in a smaller dose than digitaline. The dose used by Durand is enormously greater than this. Its administration is followed by a series of phenomena which represent three well-characterized phases. First, slowing of the pulse, with elevation of the arterial pressure; second, increased frequency of the pulse, with still further augmentation of blood-pressure; third, still further increase of pulse-frequency, with decline of blood-pressure. Adonidine appears to be without cumulative effect. A patient of Durand's, aged 14 years, took by mistake, in the course of a few hours, 0.20 centigramme (three grains), of adonidine without serious results, other than repeated vomiting and diarrhoea. All observers agree that this remedy, while producing effects closely analogous to those of digitalis in other respects, is without cumulative dangers. Leublinski alone, among those who have used it, finds adonis badly borne, giving rise to vomiting and diarrhoea.

In addition to its action upon the heart, adonidine possesses, in a high degree, diuretic properties. Michaelis has reported a case, in which digitalis having failed to augment the volume of urine, the administration of adonis was followed by an increase of thirty per cent. Altmann, Leyden, and Riegel have also testified to its diuretic properties.³

Durand, as the result of careful, systematic clin-

¹ Travaux du laboratoire de clinique de M. G. Sée, l'Hôtel-Dieu, Bulletin de la Société de Biologie, 1885.

² De l'action comparée de médicaments cardiaques, Paris, 1885.

³ Semaine Médicale, June, 1884.

ical investigations in five cases, affirms that adonidine, in one-third grain doses, augments the arterial tension, regulates the action of the heart, diminishes the frequency of the pulse, and increases the energy of the cardiac systole. Furthermore, it rapidly induces diuresis. Its effects are prompt, it is well borne, and the indications for its employment are the same as those of digitalis, without the dangers of the latter drug.

As the result of extended comparative studies of the clinical effects of this remedy, and of those of digitalis, caffein, and convallaria, Durand concludes that, notwithstanding the dangers of digitalis, which render necessary both skill and caution in its employment, it must be assigned the first rank among cardiac stimulants; that caffein is indicated in those cases requiring a more prompt effect; and that convallaria has the advantage of producing more persistent diuresis. Convallaria is to be preferred to digitalis, where the stomach is irritable; caffein, in nervous and easily excitable individuals. Although convallaria and caffein are more prompt in their action upon the kidneys, their influence upon the heart's action is less decided than that of either digitalis or of adonidine.

These observations make more extended studies of the action of adonidine desirable. The drug is on the list of Merck, of Darmstadt, and may be had in this city of Louis Genois, apothecary. Its present price is too high to warrant its general use. But, should the observations thus far made be established, it will take permanent place among the available agents in cardiac therapeutics, and an established demand will beget a sufficient supply at reasonable prices, for the Adonis vernalis is by no means rare, its rhizome having been employed in commercial black hellebore as an adulterant, and the process by which the glucoside adonidine is extracted being not necessarily expensive. The glucoside, as at present supplied by Merck, does not in all respects correspond to the description of Durand, being of a dark brown color. In a case under the care of the writer, of old mitral insufficiency, with dilatation, feeble and irregular pulse, oedema of the legs and feet, with diminished, albuminous urine, in which digitalis could not be used, adonidine in doses of one-third of a grain, *quatuor in die*, had an excellent effect both upon the circulation and upon the action of the kidneys.

CLINICAL NOTE ON THE USE OF ANTIPYRIN.¹

BY W. M. WELCH, M.D.,

PHYSICIAN TO THE MUNICIPAL HOSPITAL, PHILADELPHIA.

DURING the past year attention has been repeatedly called by the medical journals, both domestic and foreign, to antipyrin as an antipyretic. The credit of discovering this new drug belongs to a chemist by the name of Ludwig Knorr, an assistant in the chemical institute at Erlangen, Germany. The discovery is said to have been made synthetically, and the new product was named, chemically, dimethyl-

phenyl-oxyprazol. The name antipyrin was given to the preparation by Filehne, of Germany, who was the first to experiment with this drug and prove its antipyretic power. After it had been subjected to extensive trials in the hospitals of Germany, and received the endorsement of such men as Filehne, Huchard, Guttmann, Pribam, and some others of equal reputation, it was brought to this country, and a large number of practitioners here have already testified to its prompt and wonderful antithermic effect in various febrile and inflammatory diseases.

While Knorr bears the reputation of being a scientific chemist, he has resorted to the ordinary business expedient of an empiric, in procuring a patent for antipyrin. In palliation of this act, it is claimed that it was not his intention to place on the market a secret nostrum, but rather to secure to himself the sole right to manufacture a drug which he himself had discovered. The formula, however, is said to have been published in several languages. The specifications which were filed at the United States Patent Office, October 28, 1884, when a patent from this country was obtained, have been published by Dr. Samuel S. Adams, of Washington, in the *Journal of the American Medical Association* for December 5, 1885. But, whatever may be thought of Knorr's course in this matter, the drug is, nevertheless, of so great interest from a therapeutical standpoint as to be worthy of our attention.

Antipyrin, a faintly yellow and slightly bitter powder, somewhat resembles sulphate of cinchona in appearance and taste, and is very soluble in water. The dose recommended in nearly all of the journals is from 10 to 30 grains. This may be repeated until 60 grains shall have been taken, which amount it is not well to exceed during one day. In typhoid fever, however, it is said that much larger doses may be given with impunity. Filehne gave it in 30 grain doses, repeated every hour until 75 to 90 grains were given. It is recommended that the dose to phthisical and emaciated persons be much smaller, even as small as 2 to 4 grains, and increased if necessary. For children, one grain and a half for every year of the child's age, and repeated every hour, if required, is believed to be the proper dose.

Antipyrin is, without question, a most remarkably prompt and powerful antipyretic. It has no value as an antiperiodic. It has been especially recommended to reduce high temperature in typhoid fever, tuberculosis, and pneumonia. It has been known to cause a reduction of febrile temperature amounting to four or five degrees within two hours after its administration; and, according to some observers, the reduction continues for several hours. Dr. Huchard says that the antithermic effect is ordinarily maintained for from six to nine hours, and is sometimes perceptible on the following day. Reduction of the concomitant symptoms of high temperature, such as delirium and rapidity of pulse and respiration, does not always correspond with the degree of reduction of the temperature, though it has been asserted that such a correspondence exists.

The only unfavorable results upon which stress has been laid are occasional vomiting, and the production of an exanthematous eruption resembling

¹ Read before the Philadelphia County Medical Society, December 16, 1885.

measles. Collapse, proving fatal, is reported as having occurred in one or two instances. Some doubt, however, has been expressed as to whether the collapse in these cases was distinctly due to the drug. Be that as it may, it certainly is advisable until we know more of this agent, to exercise great caution in its use, especially in cases of cardiac weakness.

My experience in the use of antipyrin is limited to but one patient, and a single dose. Having under my care in August, of this year, a case of typhoid fever, in which the temperature continued high during the fourth week of the disease, I determined, with the consent of the consulting physician, to try antipyrin, the temperature (axillary) at that time, August 17th, being 104° , the pulse 130, and the respirations about 40. The patient was an adult female. Only 10 grains of the drug were administered in solution at 3.15 P.M., and the results were as follows:

4.15 P.M., temp. $101\frac{1}{2}^{\circ}$; resp. 33; pulse 125.
5.15 P.M., temp. $99\frac{1}{2}^{\circ}$; resp. 35; pulse 116.
6.15 P.M., temp. $100\frac{1}{2}^{\circ}$; resp. 36; pulse 112.
7.15 P.M., temp. 103° ; resp. 31; pulse 118.

On the following day the temperature ranged between $103\frac{2}{3}^{\circ}$ and $104\frac{1}{2}^{\circ}$, the respirations varied from 30 to 48, and the pulse fluctuated between 126 and 140. The patient died on the 22d, death being preceded by an increase of the nervous symptoms, incessant delirium, great tympanites, involuntary evacuations, and well-marked hemorrhage from the bowels. The temperature, on the day of dissolution, rose as high as $107\frac{1}{2}^{\circ}$, and at the moment of death was $106\frac{2}{3}^{\circ}$. There was no autopsy.

In this case it is seen that a single 10 grain dose of antipyrin caused a reduction of temperature in two hours amounting to four and four-fifths degrees. The concomitant symptoms (rapid pulse and respiration) did not show anything like a corresponding reduction.

While under the influence of the drug the patient's condition was very peculiar. There were restlessness and sighing, and the most profuse perspiration, I think, I have ever witnessed. The pulse was rapid, irregular, and feeble. The face and hands exhibited a peculiar pallor, and there was profound systemic depression. If there were any change in the delirium it was increased. Altogether the patient, at the end of two hours after swallowing the drug, presented such marked symptoms of approaching collapse that I became alarmed, and procured and administered as quickly as possible carbonate of ammonia and whiskey. It is proper to state that there was no nausea or vomiting.

It is evident, from the clinical history of this case, that a forced reduction of temperature in typhoid fever is not necessarily attended with the desired amelioration of the other symptoms of the disease. Nor is there, to my thinking, any reason to expect such a result, so long as the antipyretic does not change the condition or conditions upon which the fever depends. I do not wish to be understood as wholly denouncing antipyretics in diseases of high temperature, for I believe that they have a certain limited measure of usefulness; but I am of the

opinion that, in the treatment of fevers of late years, too great prominence has been given to measures which combat a single symptom, and thus attention to a great extent has been directed from the morbid processes giving rise to that and the other symptoms, which, together, instead of constituting the disease, simply give expression to it. It is like attempting to remove a shadow without disturbing the substance which produces it.

My object in presenting this communication is not to speak disparagingly of antipyrin as an antipyretic, but to call attention to the fact that it may produce unfavorable and alarming symptoms, even when given in what is generally believed to be the minimum dose; and that, in large doses, there is danger of fatal collapse.

MEDICAL PROGRESS.

CHIENE'S CONTRIBUTIONS TO PRACTICAL SURGERY.

—PROF. JOHN CHIENE, in an admirable series of practical notes on every-day surgery, makes, *inter alia*, the following suggestions:

In wounds of the face, the best stitch to use is horse-hair. Unless the wound is of considerable size, no form of drainage is necessary. The best dressing is a pad of salicylic cotton-wool or corrosive wool, fixed in position with flexible collodion.

The introduction of the sharp spoon into surgical practice has greatly simplified the treatment of lupus. In the use of the sharp spoon, special care must be taken to scrape away the raised edges of the lupoid ulcer, as it is here that the pathological change is advancing. This is best done by scraping from the sound skin toward the centre of the ulcer. After the new formation is completely removed, the best application is a powder which has been introduced into surgical practice by Dr. Lucas Championnière, of Paris. It consists of (1) light carbonate of magnesia, which has been impregnated with the vapor of eucalyptus, (2) powdered benzoine, and (3) iodoform in equal quantities.

In persistent hemorrhage from the nasal cavity, plugging of the posterior nares should not be done until an attempt has been made to check the hemorrhage by firmly grasping the nose with the finger and thumb, so as completely to prevent any air passing through the cavity in the act of breathing. This simple means, if persistently tried, will in many cases arrest the bleeding. The hemorrhage persists because the clot, which forms at the rupture in the bloodvessel, is displaced by the air being drawn forcibly through the cavity in the attempt of the patient to clear the nostrils. If this air is prevented from passing through the cavity, the clot consolidates in position, and the hemorrhage is checked.

In the reduction of a dislocation of the lower jaw, the patient should be seated on a low stool before the surgeon. In this way the surgeon gets a sufficient leverage, standing above the patient, and the reduction of the dislocation is simplified.

In the division of a tight frenum of the tongue, when a child is tongue-tied, care must be taken not to use the scissors too freely. All that is necessary is, standing

behind the patient, to nick the anterior edge of the frenum with the scissors, and to tear with the finger-nail the remainder of the band. In this way hemorrhage, which is apt to be troublesome, is prevented.

In the removal of an elongated uvula, after you have grasped the apex of the uvula, it is to be drawn forward and rendered tense before division. If it is simply grasped, and an attempt made to divide it in its normal position, it is not always an easy matter to effect the object desired. When it is rendered tense the operation is a very simple one.—*Edinburgh Medical Journal*, Dec. 1885.

NERVE-STRETCHING.—CHAUVEL, in a recent *résumé* of our existing knowledge of effects of nerve-stretching, and the indications for this procedure, maintains that, although the physiological aspects of this treatment are but imperfectly understood, the operation itself is one which should take rank in surgery beside the section and resection of nerves. It is indicated :

1. In rebellious peripheral neuralgias; and is here preferable to all ordinary treatments.
2. In contractures and in peripheral paralyses, especially of traumatic origin.
3. In the anaesthesia of leprosy.

Its efficacy is more than doubtful in tetanus, in locomotor ataxia, and in affections of the medulla. Its use should apparently be abandoned in all cases of atrophy of the optic nerve, of whatever nature or degree.—*L'Abeille Médicale*, Nov. 30, 1885.

STRYCHNIA IN ACUTE ALCOHOLISM.—DR. LARDIER has long employed strychnia in the treatment of delirium tremens, and regards it as the best remedy which we possess for this condition—as, in fact, a veritable specific. He insists upon the necessity of giving the drug in large doses. In one case he had given granules containing each $\frac{1}{4}$ grain every two hours for several days without any appreciable result. He then increased the number of granules and also administered the drug hypodermatically, giving in all $1\frac{1}{2}$ grains in the space of twenty-three hours. The result was a most happy one. The patient soon fell into a refreshing sleep, never exhibiting the slightest symptom of strychnia poisoning.—*The Practitioner*, Dec. 1885.

CARBON DISULPHIDE IN NEURALGIA.—GUERDEN recommends, as far superior to the menthol pencil in neuralgia, the application, for three minutes, of:

Carbon disulphide (rectified)	9 parts.
Essence of mint	1 part.
Shake well.	

In superficial neuralgias, whether facial, dental, or intercostal, and in superficial rheumatic pains, this application produces instantaneous relief, and not unfrequently a cure. In the deep neuralgias, as sciatica, it is necessary to project the solution upon the painful part by means of an atomizer. Actual freezing of the skin is unnecessary. Dental neuralgia usually succumbs to this treatment applied to the corresponding cheek—a slight application to the gum, or the insertion into the carious tooth of a pledget of cotton moistened with the solution being occasionally advisable. Very obstinate facial, dental, and pharyngeal neuralgias

may be subdued by gently introducing into the external auditory meatus a pledget thus moistened, squeezed out, and covered by a layer of dry cotton.—*Revue de Thérapeutique*, Dec. 1, 1885.

VAGINAL DRAINAGE IN THE TREATMENT OF UTERINE CANCER, AS A MEANS OF PREVENTING THE DEVELOPMENT OF THE CHARACTERISTIC ODOR.—WYMAN states that in those of his cases of uterine cancer in which arrangement has been made for the drainage of the vaginal fluid, there appears a marked improvement, both as regards the health of the patient and the abatement of the offensive odor characteristic of the disease.

One would, on first thought, regard the vagina as sufficiently patulous to permit the ready exit of any contained fluid, but it is found, clinically, that considerable quantities of fluid often escape from the vagina during a digital examination, even though the patient has been standing or walking for several hours. Wyman, therefore, recommends the constant retention in the vagina, in these cases, of a tube, which shall keep the vaginal orifice open and the fourchette sufficiently low to permit the removal by gravity of the offensive secretions, which, on their escape, are collected by absorbent cotton, which is frequently burnt and replaced.—*The Medical Age*, Nov. 25, 1885.

MORRHUOL, THE SUPPOSED ACTIVE PRINCIPLE OF COD-LIVER OIL.—By the evaporation of an alcoholic extract of cod-liver oil, CHAPOTEAUT has produced a substance for which are claimed all the active virtues of the original oil, the bulk of which is but one-twenty-fifth that of the latter.

According to TAPAGE, this extract is quite efficacious in the first stage of phthisis, and can be taken for months in large doses without occasioning digestive disturbances. It is well borne by infants, and has been used with good results in strumous and rachitic conditions.

Its chemical constitution is quite complex, consisting in large part of phosphorus, iodine, and bromine, apparently in organic combination.—*L'Union Médicale*, Dec. 5, 1885.

THE DANGERS OF COCAINE.—DR. HODGES, of the Leicester Infirmary, writes as follows to the London *Lancet* of December 12, 1885: Professor Hirschberg, of Berlin, (whose admirable clinic I have lately visited) uses cocaine dissolved in solution of perchloride of mercury (1 in 500), and has had no cases of septic inflammation following its use. To the list of disastrous cases recorded by Mr. Nettleship, Dr. Bell Taylor, and others, I have one to add, which occurred when I was using the ordinary solution of cocaine in distilled water.

TURPETH MINERAL IN SYPHILIS.—As a local application in certain syphilitic affections of the skin, MAURIAC advises the use of the following pomade:

Turpeth mineral	2-3 parts.
Lard	30 parts.

This is applied in the various impetiginous eruptions of the hairy portions of the skin, and to the persistent spots on the face, hands, and wrists, and is gently rubbed for five minutes up to the point of slight irritation. In the same manner are treated the minute

papules of the nasal alæ, of the labiomental fold, and of the labial commissure.—*L'Union Médicale*, Dec. 12, 1885.

HEREDITY IN BRIGHT'S DISEASE.—BAUDET published some time ago a study of three cases of nephritis occurring in the same family, from which he was led to the belief that the disease might in certain cases be hereditary. This hypothesis has received a certain measure of confirmation from another series of cases published by Kidd (*Ann. de la Société de Méd. d'Anvers*, 1885), in which, out of the twelve children of a female suffering from Bright's disease, seven died of the same malady.—*Florida Med. and Surg. Journ.*, Dec. 1885.

THE RELATION BETWEEN INFLAMMATION OF THE GUMS AND DISEASE ELSEWHERE.—The origin of the various skin eruptions, vomiting, convulsions, diarrhoea, and constipation, so frequently found to be coincident with the process of dentition in children, is, in the opinion of KACZOROWSKI, to be sought less in the condition of the teeth than in that of the gums. The author, impressed with the idea that the essence of most inflammatory processes consists in an infection by micro-parasites, proceeded to treat the swollen gums and cavity of the mouth with a solution of tincture of iodine in common salt (chloride of sodium, 1 per cent.; tr. iod., 0.5 per cent.). A half to a teaspoonful of this solution, according to the age of the child, is applied every quarter or half-hour. He found that, simultaneously with the paling of the gums, the concomitant catarrh of the respiratory and digestive mucous membranes, the feverishness, and reflex nervous phenomena came to an end, without the use of other means than a simple purgative. Further observations of this connection between diseases of the gums and other affections, led the author to apply the same treatment to adults. That the cavity of the mouth, which is the great entrance gate through which organisms find their way into the body, should be first attacked by them is not surprising; swollen gums form a suitable nidus for their development. A receptive state of the mouth is produced in children by the mechanical injury done to the gums by hard teething rings, and in adults by artificial teeth, plates, and the like, and by chemical substances. But the greatest share in the process is played by the teeth. They irritate mechanically when they are decayed, chemically when they are foul, and functionally during their eruption.—*Manchester Medical Chronicle*, December, 1885.

SALICYLATE OF SODA IN THE TREATMENT OF CONFLUENT VARIOLA.—At a recent meeting of the Bordeaux Medical and Surgical Society, M. SAINT-PHILIPPE presented a report on the use of sodium salicylate in sixty cases of variola. Under the influence of this antithermic and germicidal agent, he has observed fall of temperature and diminution in the frequency of the pulse, the reappearance of calmness, appetite, and sleep. The pathological action of the skin is modified, and on the twelfth or thirteenth day the pustules become dry. It is given from the first appearance of the eruption, in syrup, in doses of 90-120 grains for an adult, and 60-90 grains for an infant. The only observed ill-effect is a temporary anorexia. Cutaneous lotions of the salicylate

in ten per cent. solution, rapidly abort the pustules, but may be followed by numerous extremely painful abscesses.—*L'Union Médicale*, Dec. 12, 1885.

INFLUENCE OF ACUTE FEBRILE DISEASES ON PREGNANCY.—HOFMEIER (*Zeitschrift f. Geb. und Gyn.*, XI. 2) formulates as follows our present knowledge of this subject:

The gravida, when an acute febrile disease is super-added to her condition, is not more endangered than is a non-gravida affected by the same disease; except when the foetus, in consequence of the mother's sickness, dies, and abortion or premature labor occurs during the course of the febrile disease. Rarely will the life of the foetus be endangered through the sickness of the mother. Variola is the best known exception to this statement. It is the rule, however, that the foetus rarely dies directly from the acute disease affecting the mother. Its death, when it occurs, is probably rather due to the effects of the maternal high temperature. A further cause, according to Slavjansky, applicable especially to cholera, is the occurrence of a metritis decidua hemorrhagica.

As a contribution to this subject, Hofmeier reports two very carefully observed cases. The one concerns a patient of twenty-seven, mother of four children, five months pregnant, who convalesced well from a severe pneumonia, went to term, and was delivered of a healthy seven-pound foetus. This case tallies with the conclusion reached by Ricau, who found that pneumonia, attacking a patient less than 180 days gravid, was not especially dangerous to either mother or child. His figures are: of 28 cases of pneumonia, in patients gravid less than 180 days, 23 recovered (6 miscarried, 17 did not, and 5 died); whilst of 15 cases beyond 180 days, 8 recovered (5 with and 3 without miscarriage), and 7 died. The second case is of erysipelas migrans during pregnancy, and Hofmeier could not find a parallel case in literature. The case is further interesting from the observations made as to the effect of the maternal temperature on the foetal pulse, as shown in the annexed table:

Mother's temperature.	Fœtal heart.
40.5° C. = 105° F.	180.
40° C. = 104° F.	160.
38° C. = 100° F.	140.
37.5° C. = 99° F.	132.

The patient was at the end of pregnancy, did not abort, but at the end of the fever gave birth to a healthy foetus, with no sign of desquamation. The patient's lying-in period was in every way favorable, and this in spite of the belief in the homogeneity of the erysipelas and puerperal-fever coccus. The patient was delivered in the same bed and ward in which she lay sick with erysipelas, and an abscess over the sacrum (the result of erysipelas) was still discharging pus.—*American Journal of Obstetrics*, Dec. 1885.

SALIX NIGRA AS A SEXUAL SEDATIVE.—DR. F. T. PAIN, in the *Report of the Texas State Medical Society for 1885*, records the successful use of a fluid extract of *Salix nigra* (aments), or floral buds of the common Southern willow tree, in numerous cases of sexual erethism.

THE MEDICAL NEWS.

A WEEKLY JOURNAL
OF MEDICAL SCIENCE.

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SATURDAY, JANUARY 2, 1886.

THE COLD BATH IN TYPHOID FEVER.

THE question of the utility of the cold bath in typhoid fever is not yet settled, even in Germany, where the brilliant statistics of Brand and Liebermeister have resulted in the introduction of hydrotherapy into most of the large hospitals. As a routine measure, the system has not found favor in the eyes of English and American physicians, among whom Cayley, at the London Fever Hospital, seems to have been the only one who has tested the plan on a very large scale.

In the *Berliner klinische Wochenschrift*, Nos. 45 and 46, 1885, SENATOR discusses the cold-water treatment, and brings forward evidence to show that equally good results may be obtained without it. Undoubtedly during the past twenty years, since the introduction of hydrotherapy, the mortality from typhoid fever has been greatly reduced in German hospitals, but statistics comparing this with previous periods are manifestly unfair. Other important conditions must be taken into consideration, such as the nursing, the attention to diet, and the general hygienic surroundings, and to the improvement in these Senator is inclined to attribute an important share in the reduction of the death-rate. Gläser's statistics from the Hamburg General Hospital, for 1874-77, show the same mortality, 7.2 per cent., in 937 typhoid patients treated by the ordinary methods, and 868 patients subjected to the cold bath.

As a further contribution to the solution of the question, Senator has instituted a comparison between the results of the treatment of typhoid cases in the eight large hospitals of Berlin, for the ten years 1875-84. Of these he excludes three, the Charité and the two city hospitals—Friedrichshain and Mo-

abit, as the patients admitted to them are from the very poorest classes; while in the Hedwig's, Elizabeth, Lazarus, Bethanien, and Augusta hospitals the conditions are very similar, and the patients are drawn from the better classes of the poor. In the three large hospitals, the Charité, Friedrichshain, and Moabit, the average mortality of typhoid cases for the ten years was 16.4 per cent., 19.6 per cent., and 15.2 per cent., respectively. In the others, which are smaller institutions, the death-rate was considerably lower, as shown by the following figures: Hedwig's, 14.7 per cent.; Elizabeth, 12.8 per cent.; Lazarus, 14.1 per cent.; Bethanien, 13.5 per cent.; and Augusta, 12.3 per cent. In the last named institution, Senator has charge of the medical wards, and he takes pains to show that the low mortality is not due to any favoring conditions of age, sex, or rank of the patients. As regards treatment, he has followed an expectant or symptomatic plan, while in the other four hospitals the cold bath has been used to a greater or less degree; in none, perhaps, to the extent which Brand directed, though in the Bethanien, the system has been quite thoroughly enforced.

A comparison of the statistics of the five hospitals shows that the percentage of recoveries "has not been essentially influenced by the different special treatments in vogue." At the Augusta Hospital, no regular antipyretic method is employed; that is to say, the patient does not receive antipyretic treatment when the fever reaches a certain height, but the indication is always drawn from the general condition. The fever has not, as a symptom, the significance that Liebermeister and others suppose, and the changes in the nutrition of the organs do not depend on the high temperature alone. A study of tetanus teaches us that high temperature and the febrile process are two different things. Senator is not opposed to the cold bath; he believes that it has its uses, but as an antipyretic he places it far below quinine or antipyrin, which have also the advantage of being antiparasitic remedies. The bath does good, not so much by reducing the fever as by its action upon the nervous system; under its use the patient's mind becomes clearer and brighter; and another beneficial effect is upon the circulation and respiration, to both of which it is a powerful stimulus. If a rule is to be adopted, it should be that the cold bath is specially indicated in those cases with fever, stupor, and mental dulness—the febris nervosa stupida of the old writers. Statistics show very clearly that hemorrhage from the bowels is more likely to occur in this cold method of treatment, and that relapses are not more frequent.

In the discussion which followed the reading of Senator's paper at the Berlin Medical Society, GOLTDAMMER, of the Bethanien, spoke of the difficulty of forming a clear judgment concerning therapeutic measures in typhoid fever. So many factors have to

be considered, of which the treatment is, perhaps, not the most important. The nursing, the relative proportion of light and severe cases, and the time of entrance into the hospital influence the mortality to a very great degree. Thus, of the 3600 typhoid patients treated in the Bethanien during 17 years, the total mortality was only 12.8 per cent., but of the patients admitted in the third week, or later, the death-rate was 36 per cent. Goltdammer referred to the statistics of the Prussian army as illustrating the value of the cold bath in typhoid fever. Prior to 1865, the death-rate from this disease ranged from 20 to 25 per cent., but for the past nine years the mortality has been only 10.1 per cent. In the other European armies Brand's system is not fully carried out, and the death-rate still remains high, being 25 per cent. in the Austrian army, 28 to 36 per cent. in the Italian, and 36.5 per cent. in the French.

In hospital practice, the truth would seem to be that of 100 typhoid patients 75 will do well with careful nursing; of the remaining 25, from 10 to 15 will die under any method of treatment, while the fate of the remainder will depend very much on the skill with which the physician handles the therapeutic means at his disposal, of which, in certain cases, the cold bath is one of the most valuable.

THE LAST LYONS FORCEPS.

PROBABLY about a hundred years after the invention of the obstetric forceps by the senior Dr. Peter Chamberlen, Jean Palfyn, in 1723, presented to the Paris Academy of Sciences his obstetric forceps with parallel blades, and the instrument became known as the Hands of Palfyn. But about this time a knowledge of the Chamberlen instrument, so long kept secret by the inventor and by his family, became general, and for nearly a hundred years various modifications of this forceps, with handles crossing and locking, were made, while no important change was made in that invented by Palfyn, the idea involved in it being for a long time entirely lost sight of.

In the early part of the present century, however, Thenance invented a forceps with parallel branches, an instrument which, according to Tarnier, is still very much employed in a part of France, and is known by the name of the "*forceps Lyonnais*." Valette, of Lyons, also devised a forceps in which the branches were parallel instead of crossing. Another instrument, similar as to the branches being parallel, was the leniceps of Mattei. The inventor, accepting the derivation which most obstetricians have given of the word forceps, viz., *fortiter capiens*, seizing strongly, called his instrument *lenient capiens*, seizing gently. Here, by the way, is an error which it is worth while to correct. The use of the word forceps by the Latin poets, Virgil and Ovid, for ex-

ample, points very clearly to the fact that they meant by this term an instrument for seizing hot metal, and, therefore, the derivation is from *formus* hot, and *capiens*, or *capere*. Chereau has also shown that Festus used the word *formucapes* as a synonym for *forceps*, the plural of forceps.

Following the examples of Thenance and Valette, CHASSAGNY, of Lyons, whose method of applying mechanical traction to the forceps is so well known to obstetricians, and so generally rejected by them, has recently shown at Paris a new forceps of his device with parallel branches, and thus we have another Lyonnaise forceps.

A description with a woodcut of this forceps is given in *L'Union Médicale* of November 21st. The part of the branch applied to the foetal head has the usual ellipse form, and also the pelvic curve, but the branches, after the formation of this part, instead of crossing in order to form the articulation, change their direction, diverging to the right and to the left, and at the end the handles are about six inches apart, but articulate by means of a cross-bar. Chassagny holds that the crossed forceps makes, at the end of the blades, an open V, the apex of this triangle being at the articulation, while in his instrument the blades form an inverted A, with its summit at the ends of the blades. Now, when the foetal head enters the V of the crossed forceps, the blades being rather deep in the pelvis, the sides of the inferior part of the ellipse cannot be brought closer without slipping until the ends of the blades are spread out like a fan, and there is gliding caused by pressure. As the size of the foetal head increases, this gliding becomes greater, and the head enters proportionately less in the ellipse. Hence, this forceps is least adapted for the delivery of the head the more it is needed, for large heads are a frequent source of dystocia.

On the other hand, the branches of the new forceps, either in withdrawing from, or approaching to each other, always remain nearly perfectly parallel.

The pressure which the crossed forceps exerts upon the head is always oblique from below upward, and drives the head further toward the points of the blades, where it is arrested by the increased curvature of the latter; in spite of firmly grasping the handles, this gliding occurs when traction is made, and then the middle part of the blades is separated from the head, which is held only by their ends.

The new forceps, according to Chassagny, holds the head more firmly, less pressure is required, and its blades, embracing a greater extent of surface, are less likely to do injury.

Experiments made with the two forceps, in the delivery of an artificial head through a pelvis, with each of its diameters lessened about four-tenths of an inch, showed that more than twice as much force

was required with the crossed forceps to extract the head than when the extraction was made with Chassagny's instrument.

The author states that these theoretical views, as well as experimental proofs, are fully confirmed by many cases in practice. In all the applications of the forceps, even in those terminated by considerable manual or mechanical traction, the instrument leaves but insignificant or transitory traces upon the head of the infant. These traces are at their maximum on the parts of the head corresponding to the middle part of the blades, and at their minimum, or entirely absent, at those parts corresponding with the ends of the blades.

It is hardly necessary to state to those who know his views as to the importance of mechanical traction in forceps delivery, that the woodcut of his new instrument shows places for the attachment of traction cords.

Velpeau once remarked, half in jest, we think, that when a man did not know how to use the old forceps, he invented a new one. This criticism cannot, however, be applied to Chassagny, whose ability and fame as an obstetrician are great. Whether his new instrument will prove an important contribution to obstetric progress, time and a larger experience must decide.

ANALGESIA FROM LOCAL IRRITATION.

SEVERAL years ago, Brown-Séquard discovered that a more or less complete analgesia of all parts of the body could be induced by stimulating the mucous membrane of the larynx, and he showed, moreover, that the phenomenon was the result of an inhibition influence upon the nerve centres, conveyed through the superior laryngeal nerve, and that it could be produced either on the whole body or upon only one side.

He has recently communicated to the Academy of Sciences of Paris the results of additional investigations on the subject, made chiefly upon dogs and donkeys, in which latter animals the condition is readily induced and is long continued. The mucous membrane of the larynx is the region in which stimulation is most certain to be followed by analgesia. The best stimuli are chloroform and carbolic acid, but the vapor of the former must not be allowed to reach the lungs. Twelve or fifteen drops of a ten per cent. solution of cocaine, injected into the mucous membrane, produce the same effect. Other less effectual means are galvanization of the superior laryngeal nerves, cauterization of the mucosa, the insertion of a tube or the finger in the larynx, tracheotomy, or a simple incision in the skin of the neck. This laryngeal irritation will sometimes produce such absolute analgesia that large nerve trunks may be cut, deep cauterization made, or the strongest gal-

vanic currents applied without causing in the animal any signs of pain. The tactile sensation remains, and the muscle sense is not affected. The effects are best produced in animals after tracheotomy, as the larynx can then be manipulated freely and there is no danger of the chloroform vapor or the carbolic acid reaching the lungs.

It is difficult to induce similar effects in man, but Brown-Séquard has succeeded, by causing a person to inhale pure air the first two-thirds of the inspiratory act and carbolic acid vapor during the remaining third. At first the glottis closes during the inhalation, but the sensibility of the mucous membrane gradually diminishes and the vapor can then be readily inspired. Sometimes the analgesic effects are rapid, but the inhalation must be kept up, as a rule, for at least twenty minutes. The duration of the analgesia may be forty hours, and for so long a period as two days there may be complete abolition of pains produced by various causes.

We trust that these remarkable results will be confirmed, for they seem to indicate a wide range of usefulness for this curious inhibition effect, if we can secure a convenient and harmless mode of irritating the terminal filaments of the superior laryngeal nerves.

IODAL AND IODOL.

BELIEVING that iodal would be a useful substitute for iodoform as a local application, that it would be free from the disagreeable odor of the latter, and that it would have a very decided anaesthetic effect, we have endeavored for more than a year to obtain it for trial. A few weeks ago we received from a drug importing house a substance marked iodol, which at first we supposed to be that which we had sought, only having a new name. The mistake, however, was soon discovered, for iodol proved to be a new substance first made by DRs. SILBER and CIMAICIAN, of Rome; chemically it is tetra-iodo-pyrrol, and this has been abbreviated into iodol.

According to experiments made by DR. MAZZONI, of Rome, iodol is a powerful antiseptic, having an anaesthetic action, and greatly promoting the granulation of wounds. It contains nearly ninety per cent. of iodine, or about seven per cent. less than iodoform. One of the obstacles to its use is its sparing solubility, and another is its very high price, an ounce costing between two and three dollars, though it is most probable, should there be any considerable demand, it could be had for very much less than is now asked for it. The results obtained with iodol by Mazzoni have been stated in a recent number of THE NEWS.

The first and only reference to any experiment with iodol we have met may be found in the *Gazette Hebdomadaire*, for October 22, 1869. RABUTEAU pre-

pared iodal by treating iodine with a mixture of nitric acid and alcohol; he found that it was decomposed under the influence of bases, as are bromal and chloral, giving iodoform and a formiate. He injected about ninety grains into the rectum of a dog; the animal was anaesthetized, but it had convulsions, and died.

It seems remarkable that no further investigations as to the action of iodal have been made, for it is not improbable that this substance will prove to be a valuable antiseptic as well as local anaesthetic, and that it possibly may be successfully administered internally for its alterative influence, or for the purpose of producing absorption.

REVIEWS.

A MANUAL OF MICROSCOPICAL TECHNOLOGY FOR USE IN INVESTIGATIONS OF MEDICINE AND PATHOLOGICAL ANATOMY. By DR. CARL FRIEDLÄNDER, Lecturer on Pathological Anatomy in the University of Berlin. Translated, with the express permission of the author, from the second edition, by STEPHEN YATES HOWELL, M.D., of Buffalo, N. Y. New York: G. P. Putnam's Sons, 1885.

DR. HOWELL has done good service in giving to the profession a translation of this excellent manual, which is deservedly very popular in Germany. Friedländer is the pathologist at one of the large city hospitals of Berlin, and an expert in all departments of medical microscopy. The work is specially designed for students and practitioners, and contains full instruction on the details of section cutting, staining of bacteria, and the examination of the various tissues and discharges. The section on the detection and examination of microorganisms will be found of special value. On the subject of uterine and vaginal discharges, the remarks are particularly good, and the question of the diagnosis of carcinoma, adenoma, and erosion, by the examination of pieces of tissue, is very fully discussed. An intimate acquaintance with the first and second editions enables us to speak very positively of the merits of this manual as a reliable, practical guide, and the student will find in it a comprehensive exposition of the recent improvements in the field of pathological investigation.

The translator has done his work very well. He has added a section on the cholera bacillus, in which the four pages on the culture of this organism are quite superfluous. The absence of an index in the original is no excuse for the omission of it in a translation.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

SECTION OF SURGERY.

Stated Meeting, December 14, 1885.

THE CHAIRMAN, STEPHEN SMITH, M.D., IN THE CHAIR.

THE CHAIRMAN said, in introducing the

DISCUSSION ON THE INDICATIONS FOR LAPAROTOMY IN PENETRATING STAB AND SHOT WOUNDS OF THE ABDOMINAL CAVITY,

that in these cases the old method among surgeons was to watch indications, and treat the injuries as ordinary

wounds, without any operative interference. Recently, however, laparotomy has been performed successfully in so many conditions and by so many operators in this and other countries that it is a matter of importance to determine how far this procedure is applicable in the class of cases constituting the present subject of discussion. To what extent laparotomy is now resorted to in hospital practice in this city for penetrating wounds of the abdomen was made apparent in the course of the remarks of the various well-known surgeons present.

DR. JOSEPH D. BRYANT claimed that laparotomy should be performed in all cases immediately after the accident, and this statement embodies the portion of the important subject under consideration on the present occasion, which had been allotted to him as chairman. He was unwilling, however, to subscribe himself as an advocate, in the full sense of the term, of any assertion so nearly approaching dogmatism, especially when made in connection with a means of treatment which cannot as yet be said to meet the approval of the profession at large. He who unconditionally asserts that any operation or method of procedure should be resorted to in all cases, even though it is a measure accepted by the profession generally, takes a position that requires, in justice to the profession and the patient, that all operators shall be competent and well armed for its performance. Especially is conservatism necessary in the advocacy of an operation the propriety of which, as yet, is spoken of by many with doubt mingled with dread.

But a short time has elapsed since the late Prof. James R. Wood, in this hall, opposed the measure on what appeared at that time to be sound, practical principles. At least, his remarks received the general approval of the profession not only in this but in foreign countries, and although marked advancement in all surgical procedures has taken place since then, a sufficient time has not yet elapsed, nor are the members of the profession well enough informed on the details of the entire operation, for any one to proclaim boldly "laparotomy in all cases." Few, indeed, are the hospitals in the city of New York which can "immediately after the accident," in the accepted sense of the term, offer the recognized theoretical and many of the practical facilities necessary to dispatch and cleanliness in operating, not to mention other influences bearing on the success of the operation. If these facts are true, how much more ill prepared for the performance of laparotomy in any case will the patient find the members composing the great mass of the profession?

He thought it generally conceded that when a member of the profession reads a paper, or makes remarks, or takes part in such a discussion as this, he addresses himself not only to those who may be present at the meeting, but also to all others who may come to read the report of the proceedings afterward. Therefore, for the speakers to-night to place themselves on record as exponents of a method of procedure that even in the majority of the great hospitals, many of them as yet scarcely, if at all, able to meet the entire demands of the case, is to command to their less fortunate brethren a means that may prove derogatory to their professional reputations, and also relegate this now promising method to the solitude from which it is but slowly emerging.

Dr. Bryant then went on to say that he would change

somewhat the dogmatic statement with which he commenced by putting it into the form of an interrogatory, so that it should read, "Should laparotomy be performed in all cases immediately after the accident?" This interrogatory can then be considered practically as made up of three divisions: *First*, Shall laparotomy be performed in any case? *Second*, Shall it be performed in all cases? *Third*, When contemplated, shall it be done immediately after the accident?

Shall laparotomy be performed in any case? It cannot be denied that laparotomy in connection with various abdominal growths is a fully established operation, and that the results attending the invasion of the abdominal cavity by the numerous operators of this and of foreign countries, plainly attest the expediency of the measure in connection with such growths. Still, there has been a time within the easy recollection of many when even the now popular measure of ovariotomy was less favored than is now the subject of the present discussion. There is, so far as I am aware, no proof of the fact that the peritoneum of the male is not as tolerant of manipulations as is that of the female. The excellent success of Billroth, Rydygier, and many others, so far as immediate results are concerned, from operations on the stomach, pylorus, gall-bladder, spleen, kidneys, etc., of both sexes fully attest that intolerance of the peritoneum to manipulations cannot be considered a rational objection to the operation of laparotomy for penetrating abdominal wounds. The time occupied in the performance of many of the successful operations on the structures referred to is greater than that required to perform laparotomy for a penetrating wound in its entirety, therefore the length of time required cannot be urged as a rational objection to the measure. The extent of the raw surfaces made in many of the successful operations on the stomach, pylorus, etc., is far greater than can well occur in connection with laparotomy for penetrating wounds.

Among the practical elements that at the present time enter into a case of laparotomy for penetrating wounds, but which do not exist, or exert an equal force, in laparotomy for other common causes, are the following:

A. A doubt whether the abdominal viscera be injured. This doubt can exert but little influence, since the signs and symptoms of visceral penetration are as pronounced as those relating to other conditions in which laparotomy is deemed advisable. Moreover, an exploratory laparotomy enables the operator to settle the question of penetration, as it has often before settled matters of doubt in other conditions calling for this operation.

B. Existing shock. This element is almost entirely limited to those cases of laparotomy which are to be done for penetrating wounds. The shock is due either to loss of blood, to injury done the parts, or to both combined. Slight shock always attends penetrating wounds of the abdomen that involve the viscera. We believe it to be an established fact, however, that when severe shock follows immediately after the injury, it is due in the great majority of cases to loss of blood; and if it is due to loss of blood, the hemorrhage should be checked at once. An exploratory laparotomy will decide this question.

C. Unfavorable surroundings of the patient. This

element too, like the second, is limited to a laparotomy for penetrating wounds, and refers, of course, to the surroundings of the patient and the time of the injury, the removal to his home or to a hospital, and also to the absence of proper preparations to operate in accordance with the best recognized methods of procedure in such cases; none of which are likely to occur in a laparotomy for other common causes. It is impossible entirely to avoid these contingencies, but their dangers can be greatly lessened by caution in moving the patient; by taking him to a suitable hospital instead of his own home, and by increased familiarity, on the part of the profession, with all the details pertaining to the operation of laparotomy in such cases.

D. Unskilled operators. By this, Dr. Bryant said he meant that the surgeon in charge of the case might not have had his attention forcibly drawn to the details of the operation which are recognized as having an important bearing on the prognosis of such cases. More particularly would he find himself in this position if he had previously looked on the operation with a disfavor bred of prejudice, instead of the result of patient toil and observation. This element can be entirely overcome if the members of the profession will devote an ordinary amount of attention to the matter.

E. Greater exposure of the abdominal cavity and its contents. The great caution necessary in order to find out and to remove from the abdominal cavity all the blood and exuded intestinal contents, to check hemorrhage, and also to detect all points of injury, require that the intestines and the omentum should be thoroughly examined by a preconceived method, rather than by the rough jostling associated with illogical haste. The time employed and the exposure incurred in removing intestinal extravasations, in seeking for and repairing the points of injury, are not useless if the task be performed with proper dispatch, since these procedures offer the only means of saving the patient's life. The time occupied by them in laparotomy for penetrating wounds cannot be greater, under proper surroundings, than that occupied in the performance of many of the successful operations upon the stomach, duodenum, etc.; yet, without doubt, a greater surface of peritoneum is manipulated in the latter, and the peritoneum is also longer exposed to external influences. Can the presumptively unfavorable influence on the case arising from these reasons be lessened or obviated? This question, Dr. Bryant said, he could answer in the affirmative; but since its consideration more properly belonged under the head of the treatment, it could not claim a place in his present remarks.

F. Existence of hemorrhage. In visceral perforation intra-abdominal hemorrhage is necessarily a constant feature. The amount of blood lost depends, of course, largely on the size and the number of the vessels injured. The vessels of the omentum and of the intestines, especially the former, bleed with a pertinacity which is unusual in all other portions of the body, owing, it is thought, to the walls of the vessels being loosely supported by the surrounding tissues; also, to the fact that they seem to possess in a much less degree the inherent attributes which ordinarily enable the natural forces of a vessel to check hemorrhage, viz., contraction and retraction. The suspicion of the existence of much intra-abdominal hemorrhage is enough to

indicate the making, at least, of an exploratory incision, by which means its existence could be quite positively diagnosed; when, if necessary, the incision can be extended, bleeding points checked, and blood-clots removed.

G. Extravasation of intestinal contents. This is a part of the history of penetrating abdominal wounds, and constitutes the occurrence which is most dreaded by the surgeon. The late Dr. Gross asserted that no case had ever been known to recover in which fecal matter was present in the peritoneal cavity; therefore, this condition is the strongest of the indications calling for laparotomy, offering, as it does, the only means of recovery.

H. The greater difficulty of cleansing the abdominal cavity. If blood and intestinal contents have been generally diffused, the cleansing of the abdominal cavity is more tedious and difficult, and also of greater importance, than in laparotomy for other causes; but the thorough performance of this duty, at least so far as the intestinal contents are concerned, appears to be the only means of saving the life of the patient. As to blood, no one can tell the amount that might remain, and yet recovery occur.

In Dr. Bryant's opinion, laparotomy is a justifiable operation; but it is not to be attempted, even in so-called favorable cases, unless the operator can avail himself of many of the recognized means of procedure necessary to control the shock of the operation, and is sufficiently familiar with its steps to accomplish the work with accuracy and dispatch.

As to the second interrogatory, *Shall laparotomy be performed in all cases?* this portion of the subject had been allotted to others for discussion, and consequently he said he would pass on at once to the third question.

When contemplated, shall laparotomy be done immediately after the accident? Assuming all things to be equal, it should be done at once; that is, as soon as the necessary preparations required to insure a fair prospect of success could be made. In his opinion, laparotomy for penetrating wounds of the abdomen should be of two kinds: the exploratory and the actual. In the former an incision is made in the median line, so situated and of sufficient length, to expose to view the probable seat of the internal injury; which will enable the surgeon to settle not a few important and perplexing questions. He can then, in the great majority of instances, determine if penetration of a viscous has occurred, if hemorrhage is taking place, and if intestinal extravasation exists. Among the common causes of death from abdominal wounds may be mentioned, hemorrhage, peritonitis, septicæmia, exhaustion, etc. If the patient be in danger from immediate hemorrhage, the blood in the abdominal cavity can be seen through the incision in the abdominal walls. If any considerable amount of blood or of the intestinal contents exists in the peritoneal cavity, peritonitis and death will surely ensue; and these conditions can be observed through the opening. Blood in the peritoneal cavity may cause septicæmia, and that rapidly; its decomposition being hastened by the presence of escaped intestinal gases. This, too, may be seen, as its presence is easily detected by carefully raising the omentum and pushing aside the intestines in the line of the injury.

Does the exploratory incision expose the patient to unusual danger? Dr. Bryant thought not. It seemed to him that the large number of laparotomies which have been done here and abroad, and the good results attending them, especially those of Mr. Tait in England, answer this question in the negative. If this conclusion be true, all is gained that is possible, while but little can be lost from the exploratory incision; for if the conditions observed call for it, the actual laparotomy in its entirety can be done at once.

Dr. J. WILLISTON WRIGHT said that he was not prepared to take the ground that all cases of penetrating wounds of the abdomen are to be treated by laparotomy. If gunshot wounds be considered, it will be found that the large or small size of the missile in any instance makes great difference in the severity of the injury. The velocity of the missile also constitutes an important element in the gravity of the case. For example, he did not believe that the 22-calibre bullet of the ordinary revolver is calculated to do much mischief. This weighs only twenty grains, and the ordinary cartridge contains only about five grains of powder. Even if such a missile did penetrate the abdominal cavity (which is the exception) and pass through a knuckle of intestine, the opening would be so small that an eversion of the mucous membrane would be caused, sufficient to prevent the extravasation of fecal matter, while in the majority of cases the wound would be of a character such as is not followed by much hemorrhage. More commonly, however, the bullet lodges in the abdominal walls, especially if there be much adipose tissue in the latter, even when fired at very short range. If, then, he was called to such a case, and there were no symptoms present specially calling for laparotomy, he certainly would not perform this operation.

But if, on the other hand, he were called to a case in which the injury had been inflicted by what is known as an "express charge," he would expect abundant indications for its performance. In the express charge there is a 40-calibre bullet, which weighs 270 grains, and behind it there are 110 grains of powder. Even in the absence of symptoms, he would consider the case one for immediate laparotomy; for he would feel very sure that if such a missile got into the abdominal cavity at all, it would cut and tear everything that came in its way. He thought it is pretty well recognized that a blow on the abdomen from a spent ball is sometimes followed by very aggravated shock; while in other instances penetrating wounds are entirely free from shock.

In stab wounds, he would not perform laparotomy in many cases, even if he knew the wound were a penetrating one, or even if the omentum were protruding. In this connection, Dr. Wright mentioned the case of a drunken sailor, who stabbed himself in the abdomen, and, when a portion of the omentum protruded through the wound, caught hold of it, in his drunken folly, and dragged it still further out. Yet the man recovered perfectly, and that without even being laid up for an hour. On the very day that he received the injury he went to sea, and in the course of a week the protruding omentum sloughed off; after which he had no further trouble. Within the last year he had seen the same thing at Bellevue Hospital, in the case of the murderer Carpenter, who stabbed himself in the abdomen, but had no resulting symptoms. He did not believe, there-

fore, that surgical interference is called for in every case.

As to the matter of diagnosis, it is difficult to say in every case whether the peritoneum is wounded or not. In many instances there is well-marked shock simply from the force of the blow, particularly if this is in the neighborhood of the epigastrium. There are several points to be taken into consideration:

First. If the shock is extreme and protracted, the abdominal cavity has probably been penetrated.

Second. The occurrence of meteorism indicates danger to the viscera.

Third. The protrusion of the gut through the wound proves nothing as to whether the gut itself has been injured or not. This is shown, however, by the escape of the intestinal contents.

He thought, therefore, that we should be careful how we state that laparotomy is called for in any case. He then said he would go back to the consideration of the wounds made by the small pistol bullet of which he had spoken, which even when they involve a knuckle of intestine are usually of a trivial character. The penetration of the abdominal cavity by such a missile, however, is the exception, rather than the rule, and he had known one of them to be fired from a distance of only two feet and yet lodge in the belly of the pectoralis muscle. In fact, he had seen patients who had these bullets in all parts of the body, and had never known one of them to do any serious injury.

DR. ROBERT F. WEIR said that, in the main, his views were in agreement with those of Dr. Wright. He did not feel in a position to say that penetrating stab wounds of the abdomen are necessarily accompanied with injury of the intestines or abdominal viscera. Unless in any case there are symptoms indicating the presence of such complications, the surgeon has only to watch the patient carefully. In regard to gunshot wounds (a class of cases which at present is engaging the attention of the surgical mind to a large extent), there is a different state of affairs. For his own part, he had a somewhat greater respect for the capabilities of the small pistol bullet than Dr. Wright felt, since he had known it to penetrate the abdominal cavity and do a considerable amount of injury. As a rule, one of the indications is to explore the wound under any circumstances; and he thought that statistics clearly prove that every gunshot wound of the abdomen at short range should be carefully examined, in order to see whether or not it penetrates the cavity.

The question of hemorrhage always comes up in connection with the existence of shock; and it is often impossible to determine offhand, in any instance, whether the patient is suffering from the shock of the injury, or from extravasation, or from the shock of hemorrhage. If the shock is not due to hemorrhage, it will be best to wait for it to subside before performing laparotomy, as the chances of success are thereby increased. But he had learned from the experience of two sad cases that delay may prove fatal; and, therefore, he believed with Dr. Bryant that it is best to make a small exploratory incision in every case where it is impossible to decide whether the shock is due to hemorrhage or not. He would take issue with Dr. Bryant, however, in regard to his point that the simple opening shows whether there is or is not much bleeding. The

blood naturally gravitates toward the lower part of the abdominal cavity, and therefore it is often necessary to pass in a sponge or a holder in order to find out the existence of hemorrhage. If this procedure did not indicate the presence of hemorrhage, he said, he would close the small wound and wait until a later time to perform actual laparotomy, in case this was called for.

Dr. Wright had stated that a small bullet might pass through the intestine without causing extravasation of feces or otherwise doing harm; but the very reasons which would make such a wound of less severity would also be the reasons why a laparotomy would be of less severity under the circumstances. For himself, he would proceed to perform laparotomy if the exploratory incision showed that the intestines were wounded; for even if there was no extravasation of feces, there would almost certainly be an escape of gas into the peritoneal cavity.

DR. ALFRED C. POST said that, personally, he has not had occasion to perform laparotomy in any of the cases under consideration. He thought, in regard to incised wounds, that it makes a very great difference in what part of the abdomen the stab is given. If in the region of the stomach and liver, there is less danger of hemorrhage than if the wound is situated in the region of the intestines. Again, if it were still lower down, it might be below the peritoneum altogether, especially if the bladder was distended at the time. In this connection he recalled a case which occurred in the city of New York at the time of the draft riots during the war. A man was stabbed, near the residence of Dr. Van Buren, in the lower part of the abdomen, and the injury was immediately followed by a free gush of urine. He was treated by Dr. Van Buren, and recovered almost without a bad symptom. In a case of this kind the safety of the patient no doubt is due to the large size of the wound, which gave free drainage and prevented the retention of urine in the tissues. A large and direct opening would also have much the same effect as regards extravasated feces. On the contrary, a small wound is liable to be followed by more serious consequences, and he had known a fecal fistula to result from the minute opening made by an aspirator needle, which, in an attempt to aspirate the bladder, had been plunged into the intestines above it. When there is fecal extravasation, he thought that laparotomy should always be performed and the abdominal cavity thoroughly cleansed. When this is done, the patient has a fair chance of recovery; but if the feces are permitted to remain in the cavity, death is inevitable.

THE CHAIRMAN remarked that the propriety of resorting to laparotomy in any case naturally depends, to a large extent, on the idea entertained by the attending surgeon as to the dangers of the operation. The question is, whether the advantages likely to result from it outweigh the dangers attending its performance. He therefore called upon Dr. Polk, who had had a large experience in laparotomy, to speak on this point.

DR. WM. M. POLK said that, so far as dangers are concerned, the results obtained, both at home and abroad, show that the exploratory incision is quite a simple affair, comparatively free from danger. It seemed to him, however, that a simple incision, such as those who confine their attention to pelvic surgery most frequently have to make, would scarcely be sufficient in

the class of cases under discussion. The gynecologist generally knows about what condition of things he expects to find, and if a large tumor is present, he sweeps his hand around it, but does not meddle much with the intestines. Even in the case of the most extensive growths, the intestines are very little disturbed; and he had noticed that whenever they were much disturbed, the danger of the operation was greatly increased. This, then, is the question. If a limited exploration is made, there is comparatively little risk; but if it is necessary to introduce the hand and feel around among the intestines, a great deal is added to the risk. Within the last two or three years, he had seen this strikingly illustrated in this city in Tait's and other similar operations. Formerly, when there were marked adhesions, the intestines were freely handled, and sometimes laid up over the abdomen, and a fatal result frequently followed. Within the last eighteen months, however, in the same class of cases, the results have been very much more favorable, and this was owing to a different mode of procedure. A much smaller incision is now used, and the adhesions are torn away by the hand without regard to hemorrhage, because the latter soon ceases, and a drainage-tube is introduced to remove the blood. Instead of the operation covering an hour or an hour and a half as before, it takes now only twenty or twenty-five minutes. The whole question of danger, therefore, it seemed to him, depends on the amount of handling of the viscera required in any given case. So far as the simple opening of the peritoneum is concerned, at the present time he regarded it as attended with as little danger as five years ago he would have regarded the sewing up of the cervix uteri.

DR. W. GILL WYLIE said that he thought the peritoneal cavity should be opened first, for the purpose of diagnosis. This whole subject, he believed, would be more clear if the etiology and pathology of shock were better understood. To his mind, the shock in these cases depends largely on changes in intra-abdominal pressure and on hemorrhage. The dangers to which Dr. Polk had alluded are due, he thought, not so much to handling of the intestines as to exposure to septic influences from the atmosphere, sponges, etc. According to his observation, the large majority of the deaths were due to septic infection. He would have no hesitation in opening the peritoneum in any case where the patient's life is in question. There is very little danger of increasing shock thereby, and he believed that when the shock is very marked, it can be inferred that there is some hemorrhage; so that the operation is urgently demanded under the circumstances. After performing operations in the abdominal cavity he not infrequently washed out the latter with a solution of bichloride of mercury, 1:10,000; following this with the injection of simple hot water.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, December 8, 1885.

THE PRESIDENT, CHARLES MCBURNEY, M.D.,
IN THE CHAIR.

SUPRAPUBIC LITHOTOMY; SUTURE OF BLADDER WOUND;
PRIMARY UNION.

DR. PILCHER presented a man, twenty-one years of age, upon whom, two weeks ago that day, he had oper-

ated for the removal of stone from the bladder by the suprapubic method, as perfected by Petersen, of Kiel. The patient had suffered from symptoms of stone about nine years. After etherization, a rubber ball having been introduced into the rectum, it was distended with about ten ounces of water, after which nine ounces of a warm solution of boracic acid were injected into the bladder through a soft rubber catheter. The result was to cause a very marked protuberance of the bladder above the pubis, and to make exposure of its antero-superior wall, by incision above the symphysis pubis, remarkably easy. The wall of the bladder having been exposed, he followed the suggestion of von Antal, of making an oblique incision through the muscular wall, so as to increase the width of the fresh surfaces afterward to be united by suture. This step in the operation having been accomplished without serious inconvenience, the blue color of the mucous membrane of the bladder could be plainly seen by all present in the operating-room of the Post-graduate Medical School, where the operation was performed. Upon the incision into the bladder being completed, the stone was seized and removed without difficulty. It was of moderate size, weighing 207 grains in its dry state, and was composed of a nucleus of uric acid with an external layer of oxalate of lime principally, with some triple phosphates.

In this case, after removal of the stone, the ease with which the interior of the bladder could be inspected was particularly noteworthy. The posterior wall was clearly visible, and the whole anterior wall was easy of exploration.

The catheter, through which the preliminary injection of boracic acid solution had been made, was left *in situ* to insure continuous drainage of urine; the wound in the bladder was closed by seven or eight points of fine silk suture passing through only the muscular and submucous layers. The suprajacent musculotendinous layer was then closed by a running catgut suture; the subcutaneous tissue was then brought together and supported by three harelip pins, and finally a superficial line of sutures was placed through the integumental wound, a little cotton sprinkled with iodoform was laid upon the wound, and the man was put to bed. Absolute well-doing attended the after-course of the case; the catheter was removed on the ninth day, and the pins upon the day following. On the eleventh day the man went to his home, permanent primary union throughout the whole extent of the wound, without unpleasant symptoms of any kind, having taken place.

About fifteen months ago, Dr. Pilcher had advised with regard to an operation in the case of a child ten or eleven years of age, in whom, according to his wish, the suprapubic method was likewise adopted. The operation was performed by Dr. McPhail at the Brooklyn Orphan Asylum. In that case they did not attempt to close the vesical wound, and the suprapubic wound was left to granulate, while the bladder was drained by a pair of drainage tubes passing through the suprapubic wound to the base of the bladder and outwardly over the pubis and down between the thighs, after the method of Perrier. The progress of the case was as satisfactory as could be expected; granulation took place, and the wound ultimately healed, the patient being

discharged, cured, at the end of the third or fourth week.

He thought the case presented had a bearing more particularly upon what seemed to be taking place at the present time, namely, a readjustment of our views with regard to the relative merits of cutting or crushing methods for removal of stones from the bladder.

DR. BRIDDON asked Dr. Pilcher whether he objected to the operation of crushing.

DR. PILCHER replied that he would not object to crushing, yet it seemed to him that under ordinary circumstances such an operation as this is more favorable for the patient than the operation of crushing. He might say, however, he was especially led to do the suprapubic operation in this case, to illustrate to the general practitioners who formed his class, what he considered to be the best operation available to those who had not acquired the technical skill necessary to crush a stone in the bladder.

DR. SANDS thought that it would hardly be proper to allow a case of this sort, successful as it was, to go upon record without an expression of doubt as to the expediency, if not as to the propriety, of removing a stone of the size of the one presented, and which seemed to be friable, by any cutting operation. This patient had certainly recovered very promptly, else he would not have been shown within a fortnight; but it was probably within the experience of most of the surgeons present that after crushing stones quite as large as this one, and even larger, the patients had been able to leave the hospital in the course of a week. He acknowledged the very great superiority of Petersen's operation in certain cases, but he thought it could not be recommended to the general practitioner as one free from risk. It seemed to him that the operation is one which will always require considerable skill in order to avoid danger to life, and our experience is not large enough to enable us to recommend this as a preferable operation to one which has stood the test of extensive trial, and has proved to be almost absolutely safe in healthy young adults. As an example of successful operation, he would accept Dr. Pilcher's case, but as an example for imitation he would reject it.

DR. A. C. POST recalled a case in which he performed lithotripsy long before evacuation of the bladder had been introduced, three crushing operations having been performed at his clinic, the patient returning to his home on each occasion, a distance of nineteen miles. No unpleasant symptoms developed.

DR. C. K. BRIDDON said that within a few weeks past he removed a stone by the crushing operation in a man more than seventy years of age who had enlargement of the prostate and cystitis of an aggravated character. The operation lasted three hours, and more than six hundred grains of calculous material were removed, yet the man was able to leave the hospital within a week. Eight or nine days ago he performed Bigelow's operation on a man sixty-nine years of age, who left the hospital within a week, with relief from his bladder symptoms. But he thought there was sufficient justification for the operation performed by Dr. Pilcher, for he certainly would prefer to be cut for a stone than to have the stone crushed by a man who was not accustomed to do the crushing operation.

THE PRESIDENT asked Dr. Briddon whether he would

not consider the first case to which he had referred as specially suited for the high operation.

DR. BRIDDON replied that he would not want any better result than that obtained by crushing.

THE PRESIDENT said that would apply to Dr. Pilcher's case as well, which was altogether of a different character.

DR. BRIDDON said that if he should have cut this man he would have chosen the high operation in preference to the low one. In such a case the high operation is certainly preferable.

DR. POST asked whether there are not two sides to that question. In a case of enlarged prostate with cystitis, does not the low operation afford a fair prospect of relief of the prostatic and vesical difficulty independently of removal of the stone? A number of cases had been placed on record with such a result by high authorities, such as Sir Wm. Ferguson, Reginald Harrison, Dr. Gouley, and others.

DR. BRIDDON said that such had not been his experience. If relief followed the operation, it was only of short duration, the symptoms returning with as much severity as before.

DR. T. M. MARKOE remarked that, after all, there remain a certain number of cases, small to be sure, in which Bigelow's operation is unsuitable by reason of the largeness or hardness of the stone, and in which he thought the question as to the advisability of the high operation in preference to the low one fairly presented itself. As to a comparison of the high or low operation with crushing, general surgical experience is decidedly in favor of the crushing operation. But in cases in which crushing is inadvisable, the high operation, as modified by Petersen, he regards as, in certain cases, preferable to any other, and it must be accepted as an admirable contribution to modern surgery.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, December 16, 1885.

THE PRESIDENT, R. J. LEVIS, M.D.,
IN THE CHAIR.

DR. WM. M. WELCH read a paper entitled

CLINICAL NOTE ON THE USE OF ANTIPIVRIN.

(See page 9.)

DR. J. S. NEFF said that he had used it about forty times in typhoid fever. The drug is only used to reduce very high temperatures and that result is obtained in the vast number of cases. When given in large doses to animals it produces death by cardiac paralysis. If given properly, antipyrrin rarely produces nausea. If given simply in solution in water, it produces nausea in about two or three cases out of every ten. If administered in a simple bitter or aromatic, the proportion is not more than one in ten. He had never seen the delirium increased or headache produced by it. In typhoid fever he had seen large doses fail to reduce temperature, and in some cases where the temperature was reduced, there was no amelioration of the other symptoms, and in the course of two or three hours the temperature again rose; in such cases it is well to suspend its administration. He relied upon quinine in ordinary cases. Profuse sweating is very constant after

the use of antipyrin. If the temperature rises to 103° and sponging does not control it, then he uses antipyrin.

DR. L. K. BALDWIN, having seen the case reported, fully corroborated what had been said by Dr. Welch. The patient's condition after the administration of the antipyrin was alarming, and he felt sure that if the dose had been fifteen or twenty grains, the result would have been fatal in two or three hours. He was under the impression that the drug is apt to be used recklessly, as reports on its use give such a wide margin in dose—that is, from ten to sixty grains or more in a few hours.

DR. NEFF claimed that antipyrin is useful in the symptomatic treatment of typhoid fever for the reduction of temperature. It has also been used in sunstroke, puerperal septicæmia, and other affections. It is more particularly in the early periods of typhoid that it is especially useful in reducing the temperature. The fever of the latter periods is of the same nature as surgical fever, and is due to the absorption of putrefactive matters from the ulcerated Peyer's patches. In such cases, of course, it is necessary to get rid of the cause in order permanently to lower the temperature. The drug must be used judiciously, and where a person is in collapse it should be used with great caution. He had never seen it produce collapse or even a chill. Where the temperature is over 104°, he usually gives twenty grains. If at the end of one hour the temperature be not reduced, ten grains more are administered, to be followed, in one hour, if necessary, by another twenty grain dose. It has been claimed that antipyrin also reduces the pulse. This is not always so. The pulse falls, but not in the same ratio as the temperature, and at times the pulse is not reduced at all. He would not regard Dr. Welch's case as a death from antipyrin. From eighty to one hundred grains per diem have been given at the Philadelphia and Pennsylvania Hospitals without any alarming symptoms being produced.

DR. A. W. MACCOY said that his experience led him to believe that the remedy is beneficial in much smaller doses than those ordinarily recommended. He uses from five to ten grains, and has not exceeded ten grain doses in tuberculosis. He has found it useful in the high temperature and night-sweats of phthisis.

DR. WELCH was inclined to believe, from what he had read in the journals and from the discussion elicited, that his experience in this case was exceptional. He had not reported it as a case of death from antipyrin, as the patient lived five days after the administration of the dose, and reacted fully from its depressing effect.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.

*Thirteenth Annual Meeting, held at Washington, D. C.,
December 8, 9, 10, and 11, 1885.*

(Specially reported for THE MEDICAL NEWS.)

THURSDAY, DECEMBER 10TH.—THIRD DAY.

MORNING SESSION.

THE Association received, and referred to a special committee for consideration and recommendation, a series of resolutions from the Board of Health of Philadelphia, in which it is resolved that no rags from foreign ports shall be permitted to land at the port of Philadel-

phia until after they have been disinfected. The necessity for passing judgment upon the matter of the importation of rags was urged. The resolutions were referred to a special committee for consideration.

The Executive Committee presented a modification of the resolution of Dr. Lamb, providing for the appointment of a committee to examine into

THE SANITARY CONDITIONS OF THE SEVERAL TRADES, and suggest improvements therein. It was adopted.

DR. JOHN H. RAUCH, of Illinois, then read the first paper of the day, entitled,

MARITIME QUARANTINES FROM THE MOUTH OF THE ST. LAWRENCE TO THE RIO GRANDE,

which was a report upon the quarantine systems of each of the coast States. He described the various improvements which had been made in quarantine matters at the different ports visited, and a separate report for each State.

DR. JOSEPH HOLT, of New Orleans, then spoke of the sanitary measures taken for the protection of New Orleans, both municipal and maritime. He described the measures not yet taken by New Orleans for municipal sanitation, but toward which the people are being educated by health boards and the intelligent press. Already a plan is being prepared for the systematic sewerage of the city. Maritime sanitation has taken the place of quarantine along the coast. The theory of germ origin for the essential cause of diphtheria, consumption, smallpox, yellow fever, and kindred diseases, has passed from the realm of uncertainty into a crystallized fact. Burning tar barrels, prayers, and processions, are no longer relied upon as disinfectants. We have tried these, and they have invariably failed. We are no longer fighting the devil and his works, but a microscopic germ—a little leaven, which, if not speedily destroyed, leavens the whole lump. Yellow fever and cholera are due to living organisms, and it is to the destruction of these that our efforts must be directed. The surest prevention of a conflagration is to quench the first spark. The surest prevention of an epidemic is to act on the first suspicion of an epidemic disease.

He spoke of the experiments in Brazil and Mexico, relative to inoculation for yellow fever, and stated that it has been fully proved that the germ can be inoculated into the body of an unvaccinated person, and that a mild form of yellow fever will be thereby produced, and that persons so inoculated have been able to pass unscathed through the most virulent epidemics of that disease. The principal object of his visit to Washington was to present the following resolutions to the Association, with the request that they would bring them to the attention of Congress:

Whereas, The question of immunity from yellow fever is so intimately connected with the social, industrial, and commercial growth of Tennessee, and the Southern Atlantic and the Gulf States of the Union, as to determine the destiny of Memphis, Charleston, Savannah, Pensacola, Mobile, New Orleans, and Galveston; and,

Whereas, A large accumulating mass of testimony that the power of protecting the unacclimated against yellow fever has been discovered and proved in the inoculations of the essential germ or cause of the disease by methods distinctly formulated and available,

these aforesaid declarations and numerous instances cited in corroboration, emanating from medical scientists at the head of the biological departments in the highest institutions of learning in Mexico and Brazil, authorized by and bearing the endorsement of their respective governments:

Resolved, That we, the representatives of the boards of health in the several States of the Union, and we, the officers and members of the American Public Health Association, regarding the question as pre-eminently a vital issue, as one, in its assumptions, true or false, and, if true, of incalculable worth, surpassing the computation of many millions of dollars, and to the saving of tens of thousands of lives of its own people, hereby petition and urge upon both branches of Congress, now assembled, to appoint a commission for the purpose of making a complete investigation of, and reporting after a thorough examination of the methods pursued, their effectiveness in protecting the unacclimated against the yellow fever infection, together with all associated observations and experiments that may be ascertained.

Resolved, That in the aforesaid petition the commission shall be stated to consist of three persons, one of whom shall be of known ability and special attainment in biological research, particularly in the department of microscopic investigation and culture of the essential germ as causative of the infectious and contagious diseases. The other two members of the commission shall be medical men of recognized ability, based upon long and ample experience, competent to give expert consideration to all phases of the symptoms and course of yellow fever in any form wherein the phenomena of the disease may be present, whether induced in the course of pestilential invasion or in purposely devised inoculation.

Resolved, That this commission aforesaid shall proceed, at the earliest possible moment, to Rio de Janeiro as the first field of its labors. Having completed there its work, it shall proceed to Mexico, and, if necessary in the accumulation of testimony, to Panama, Colon, and Havana.

Resolved, That the sum of \$30,000, or so much thereof as may be actually required, be appropriated to pay the necessary and unavoidable travelling and other expenses and the salaries of the members of the commission.

Resolved, That the sum of \$5000 shall be paid as a recompense to each member of the aforesaid commission.

The last paper of the morning session, by DR. S. T. ARMSTRONG, U. S. Marine Service, was entitled

MARITIME SANITATION,

and treated of the subject from the standpoint of the sailor, the passenger, the cargo, the vessel, and the port. He called attention to the necessity of legislation for the preliminary examination of sailors before shipment, and of a required minimum cubic space in the sleeping quarters of the crew, etc., by medical officers of the Treasury Department, instead of collectors of customs. Disinfection of cargoes and vessels from infected ports, both by shipmasters and by inspecting officers at the port of arrival. The sanitary condition

of the port was only alluded to, as he considered this to be the province of the Association.

DR. RAYMOND, of Brooklyn, offered a resolution that the subject of

THE PRACTICABILITY OF DISINFECTING SEWERS

be referred to the Committee on Disinfectants, with a request to report at the next meeting. The resolution was referred to the Executive Committee.

The Association then adjourned to call at the Executive Mansion and

PAY THEIR RESPECTS TO THE PRESIDENT,

who received them in the East Room, and greeted them cordially, shaking hands with about four hundred members.

THE EXECUTIVE COMMITTEE

held a session immediately after the adjournment of the morning session, and it was decided that the *next annual meeting* of the Association should be held at Toronto, Ontario. Memphis, Tenn., was very urgently recommended.

THE AWARD OF THE LOMB PRIZES

for the best essays was next in order.

For the best essay on *Healthy Homes and Foods for the Working Classes*, the second prize was awarded to Victor C. Vaughn, of Ann Arbor, Mich. The first prize was not awarded.

For the best essay on *The Sanitary Condition and Necessities of School Houses and School Life*, the second prize was awarded to Dr. F. Lincoln, of Boston, Mass. The first prize was not awarded.

For the best essay on *Disinfection and Individual Prophylaxis against Infectious Diseases*, the first prize was awarded to Dr. George W. Sternberg, of Baltimore, Md., amid great applause.

For the next paper, *The Preventable Causes of Diseases, Injury, and Death in American Manufactories and Workshops, and the best means and appliances for preventing and avoiding them*, the second prize was awarded to Dr. George H. Ireland, of Springfield, Mass. The first prize was not awarded.

The President then introduced Mr. Henry Lomb, who, upon motion of Dr. J. S. Billings, was unanimously elected a life member of the Association, amid great applause.

PROF. D. A. SARGENT, of Harvard University, then submitted

THE REPORT OF THE COMMITTEE ON SCHOOL HYGIENE,

which set forth that the uneven manner in which physical and mental training is distributed is shown at once by the fact that those schools which have large playgrounds attached, and a river upon which to row boats, never fail to advertise the fact, while those which do not possess these advantages give their attention to theoretical training. As a consequence, there are unsatisfactory reports from all sides. Here we have all muscle and no brain development, and there superior mental attainments and nervous prostration. The Committee thought that course of training should be adopted which actual observation had demonstrated to distribute most thoroughly physical exercise in proper proportion with the mental exercises of education. Youths

should also be thoroughly taught the first laws of the body, the necessity of cleanliness, pure air in houses, etc., and not only taught these principles, but shown how to make practical use of their knowledge.

DR. JOHN MORRIS, of Baltimore, then read

THE REPORT OF THE COMMITTEE ON THE DISPOSAL
OF THE DEAD.

In this country six cremation societies have been established, and two crematories, with indications of an increase. If the present mode of burial is continued, great and radical reforms must be instituted to protect the living from the contamination of the dead. Interment must be regulated by legislation, and placed under the control of the health authorities. Not only the time, but all the details of burial must be regulated by ordinance. Embalming should be absolutely prohibited; dissolution of the body should be hastened, not retarded. No doubt the general acceptance of the germ theory, and the surprising discoveries of Pasteur and others concerning the life and office of round-worms, have materially influenced public thought in this matter. Even those who do not favor cremation admit the necessity of reform in the present mode of burial. Cremation is gaining ground in Europe. A bill legalizing the process has been introduced in the French Chamber of Deputies, and is supported by such advanced thinkers as Paul Bert and Renan. It is proposed to build a large crematorium near Paris, and an engineer has been sent to Italy to study the best plan. Three hundred and ninety-six bodies were cremated in Italy last year. A valuable contribution to the subject of inhumation has been recently made in France by Drs. Dumesnil and Fauvel. The deductions therefrom are that in every cavity dug where organic matters are decomposing, there are produced two phenomena which jeopardize the lives of those exposed to their influence, viz., the great and rapid disengagement of carbonic acid, and notable diminution of oxygen in the air.

The Spanish Cortes has passed a bill allowing cremation. The dreadful scenes in Granada, where hundreds of bodies lay for days uncovered during the late cholera epidemic, no doubt influenced the legislation. Germany is also adopting cremation, and the *Berlin Verein für innere Medicin* has declared that the best authorities in the field of hygiene have clearly proved that cremation is the safest preventative against the spread of contagious diseases by corpses. There were one hundred and eighty-six cremations in Germany last year.

In Denmark the subject is exciting marked attention. At the meeting of the International Medical Congress, held at Copenhagen in 1884, Dr. Leuson presented a report on the cemeteries of Denmark, and their influence on the public health. After a most thorough and scientific investigation into the public health of Copenhagen, he concludes that it has been repeatedly demonstrated that pestilential diseases have been traced to the use of water from streams or wells contaminated by the presence of cadaveric decomposition. Other schemes for the disposal of the dead have been urged, among them the encasement of the body in a sort of papier-maché coffin, which is soluble and permits the surrounding earth to reach the corpse in a very short time.

In conclusion, Dr. Morris said :

"If incineration were accepted, all these evils would

be arrested. It is generally admitted that this process should be adopted in all great epidemics and after battles, but it would be wise to extend it to cases of zymotic disease, such as cholera, smallpox, scarlet fever, and diphtheria. These poisons are preserved for years, and at certain times and under certain conditions vent their destructive force on the human race."

Considerable discussion followed the reading of this paper, a majority of the speakers apparently favoring cremation.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 17, 1885.

THE PRESIDENT, A. JACOBI, M.D., IN THE CHAIR.

DR. T. GAILLARD THOMAS read a paper on
VAGINAL AND VULVAR ENTEROCELE.

He commenced with the statement that there are five varieties of hernia which may show themselves by the vagina and vulva, viz., (1) cystocele, (2) rectocele, (3) vaginal enterocele, (4) pudendal enterocele, (5) perineal enterocele. In the latter there is a descent of the small intestines by protrusion through the perineum. Other varieties might also be given, based on the contents of these hernial sacs, in which the ovaries, the uterus, and the Fallopian tubes, either empty or filled with the products of conception, have in exceptional cases been found; or upon some extremely rare development of this condition, such as in one case of Burns, in which the base of the bladder, passing down alongside of the right wall of the vagina, formed a hernia in the labium majus of that side. But for practical purposes it is only necessary to consider the varieties of hernia named, and this paper was confined to descent of the intestines through the pelvic roof, and their protrusion into the labia majora, the vagina, or through the perineum.

It is curious to see how very generally these varieties of hernia have been ignored in systematic treatises on gynecology, and this is the more remarkable, since errors in diagnosis of them are very liable to occur. Even in literature outside of systematic treatises it is difficult to find much upon the subject. Garengrot, in 1736, according to A. Bérard, was the first to describe this form of hernia, and he was followed by Verdier, Haen, Sandifort, and Richter. Sir Astley Cooper treated of it fully in his celebrated work upon hernia, in 1804. Bérard's *Dictionnaire de Médecine*, published in 1846, gave the best account of it which Dr. Thomas had met.

Having mentioned various instances of this accident which have been put on record by different writers, he went on to speak particularly of

Vaginal enterocele, which consists in a descent of the intestines into the pelvic cavity, either in front of or posterior to the broad ligament of one side. As Boyer and Richter long since pointed out, the intestines never descend directly in the median line, either anteriorly or posteriorly, on account of the intimate relations of the vagina at these points; but always descend a little obliquely, and most generally posteriorly. Usually, it is the intestine alone that descends in these hernial protrusions, but sometimes the omentum accompanies it; and usually, also, it is the small intestine that composes the hernia, but the large intestine may also be involved.

Vaginal hernia, as a rule, develops itself in the fol-

lowing manner: A loop of intestine gradually pushes downward the prolongation of the peritoneum which forms the pouch of Douglas, until it impinges upon the outside of the wall of the vagina, and causes it to arch inward. This mechanical influence being continued, and gradually increased, a tumor forms in the vaginal canal, invests one wall of that canal more and more completely, and may end by escaping from the vulva and hanging outside the body as a complete prolapse of the bladder, or of the uterus, would do.

Under these circumstances, it is evident that the tumor which protrudes has for its component parts, first, the invested vaginal wall; second, the peritoneum; and, third, the intestines. As Bérard has pointed out, it is very important to determine whether the entire thickness of the vaginal wall is inverted and forms the envelope of the tumor, or whether the external coat is torn so as to present an opening through which the hernia passes; and although in the literature of the subject reports of several autopsies are to be found, the point apparently still remains unsettled.

Unquestionably the greatest danger attending this form of hernia, as well as the two other varieties that are to be considered, arises from the possibility of an error of diagnosis on the part of the impulsive or unwary surgeon. If the tumor occurs during labor and obstructs the progress of the foetal head, it may, perhaps, be mistaken for an ovarian or parovarian cyst with a long pedicle, which has been pushed into the pelvis, in which case a trocar and canula may be plunged in and the operator be horrified at the escape of fecal matter and intestinal gases. Or, if the condition is found to exist in the non-parturient woman, an effort may be made to remove it, which will open the eyes of the operator in a very painful manner in regard to the true nature of the tumor. In this connection Dr. Thomas quoted two instructive cases—one published in the *Centralblatt für Chirurgie* for May, 1879, and one related by Gunz.

Parturition is the most frequent cause of the varieties of hernia under consideration, but it is not to be lost sight of that some of the most striking cases of the accident recorded have occurred in multiparous women. These are usually due to violent efforts, falls, and the previous existence of pelvic tumors which have burst or been removed. Vaginal hernia, so long as it remains in the pelvic cavity and does not interfere with parturition, is usually a matter of little moment and the source of little inconvenience. Under certain malign influences, however, occurring during parturition, as well as in the non-parturient state, such as pressure from the fetal head, inflammatory processes, fecal impaction, torsion of the contents of the sac, or the existence of a neoplasm, strangulation may occur.

The symptoms which are then apt to develop are: difficulty in locomotion, pelvic tenesmus, colicky pains, dragging sensations, tendency to constipation, and, in time, vomiting. Should the accident complicate parturition, obstructed labor is apt to result. Upon vaginal examination a tumor of greater or less size is found in the vagina, and is diagnosticated by the following physical signs: It is supple, soft, and yielding; decreases upon pressure; gives a sense of gurgling to the finger, if not to the ear; increases upon the patient's coughing or straining; yields resonance upon percussion; and is

very generally reducible if the patient be placed in the knee-chest position, and efficient taxis is practised.

Vaginal enterocele may be confounded by a careless and rapid diagnostician with the following conditions: prolapse of vagina, uterus, bladder, or rectum, or with a combination of these displacements; with vaginal cyst; with parovarian or ovarian cyst; with a fibrous tumor presenting low down in the pelvis, with a "cold abscess" of the pelvis; or with a marked case of tubal dropsy. Error is likely to creep in from the practitioner's being too confident, too much off his guard, and too little inclined to consider the possibility of a mistake. If he approaches these cases calmly, philosophically, and in a proper spirit of diagnostic investigation, it is very improbable that an erroneous diagnosis will occur. Having mentioned that most cases present striking features, he quoted the graphic description of a case given by Sir Astley Cooper.

It is to be remembered that, like hernia occurring elsewhere, these forms now under consideration may show themselves in two ways; first, by a brusque and sudden development, marked by alarming and decided symptoms; and, secondly, by a development so gradual and uneventful as to symptoms as to escape recognition entirely until the mere mechanical results of the hernial tumor force themselves upon the attention of patient or physician. In certain very rare cases acute vaginal hernia occurs as a consequence of some traumatic influence destroying the continuity of this canal in its upper part, and a striking instance of this which occurred in the service of M. Auger, was reported by M. Pennel in *La France Médicale* for November, 1881. Dr. Thomas also related two cases which had occurred under his own observation. There is more danger of erroneous diagnosis in the gradually developing, creeping, insidious cases than in the acute ones.

Pudendal enterocele demonstrates its existence by the presence of an elastic tumor, about as large as a small hen's egg, or a pigeon's egg, about the middle of the labium majus of one side. Having explained its mode of origin, he said that some of the French writers divide this form of hernia into two varieties: first, anterior labial hernia; and, second, posterior labial hernia. From inguinal hernia reaching by descent into the labium majus the internal variety may be thus distinguished: 1st. The finger, pushing the tumor upward, will pass into the pelvic cavity between the ischium and vagina. 2d. At the level of the os uteri, or thereabout, it will enter the pelvic roof. 3d. Pressure being maintained in the inguinal canal, and the patient being ordered to cough, it will, in spite of the pressure, recur.

The following conditions were mentioned as liable to be confounded with pudendal hernia: cyst or abscess of the vulvo-vaginal gland; abscess of labium majus; fatty or fibrous tumors of the labium; tumors descending from the pelvic cavity. Cases in illustration of some of these points were quoted, and Dr. Thomas then said that the differentiation of pudendal hernia from these conditions of the labia should be very carefully considered; for if an erroneous diagnosis were made here, a fatal issue might result. The diagnostic signs which prove most reliable, and which may almost be styled pathognomonic, are these: (1) Airy feeling upon palpation; (2) gurgling upon replacement; (3) diminished tension in the dorsal decubitus; (4) diminution of bulk upon

taxis; (5) resonance upon percussion; (6) percussion upon coughing; (7) intestinal pains of colicky character.

Perineal hernia may affect both male and female, and in the latter it consists of the descent of the intestine between the vagina and rectum, the advance being made posterior to the broad ligament, and continuing until the perineal muscles are forced apart, and the gut, with its perineal envelope, is arrested by the skin. All these varieties of hernia are usually readily amenable to taxis, and this Dr. Thomas had invariably found to be greatly facilitated by the knee-chest or genu-pectoral position. In some rare cases strangulation occurred. Under these circumstances the same surgical practice is indicated as in inguinal or crural hernia, viz., cautious opening of the sac and section of the constricting band, by passing up a probe-pointed bistoury.

Before closing this paper he said he desired to put on record a remarkable case of extreme vaginal hernia, which presented some features which he had never met with in such literature of the subject as had fallen under his observation. The patient was a married lady and a multipara, thirty-nine years of age, who came from a country town to consult him during the past autumn. The history that she gave was, that six years ago she discovered a lump in the vulva, in consequence of which she suffered from difficulty of locomotion, difficult defecation and urination, pain, and other distressing symptoms. This lump gradually increased in size till, hanging outside the body, it reached to the middle of the thigh on the right side. In the meanwhile all the previous symptoms became intensely aggravated, and the patient was now greatly emaciated. While the tumor hung down upon the thigh she could neither stand nor walk without extreme suffering; and when it was pushed up into the pelvis its presence gave rise to so much pain and discomfort that she was compelled to force it out again. She had consulted a large number of physicians without obtaining relief, and both she and her husband were now desperate, being willing to try any expedient whatever that promised any hope.

On inspection, the tumor was found to present all the gross appearances of an enormous cystocele; but a closer examination showed that it was of an entirely different nature. It was found to be firmly attached to the ischium on the right side; while the uterus was pressed almost out of reach on the left side of the pelvis. On inserting a catheter into the bladder, the latter was ascertained to be high up, extending obliquely in front of the uterus, and to have no connection whatever with the tumor. By taxis the tumor could be replaced within the pelvis, and in this reposition an extremely slight gurgling sound (which occurred only once) was elicited. There could be no doubt, however, that it was a case of hernia.

This was a case in which all the simpler methods of treatment had failed to afford any relief, and as the weight of the mass, and the pressure exerted by it on the bladder and rectum, were so great as to render the woman utterly miserable, Dr. Thomas proposed the following operation: Perform laparotomy, an assistant meanwhile pushing the tumor well within the pelvis; drag it up into the abdomen, and, all the arteries having been drawn out of the sac, fasten it by sutures in the abdominal wound, the heavy tumor being sustained by two knitting needles crossed. As soon as the operation

was explained, the proposal was gladly accepted by the lady and her husband, and in the early part of November last, in the presence of his colleagues, Drs. Emmet and Bozeman, of the Woman's Hospital, who entirely approved of the procedure, laparotomy was performed.

On cutting through the abdominal walls he was surprised to encounter what appeared to be a soft fibrous tumor, on a level with the symphysis pubis, which was covered by peritoneum, and very movable. It had no connection with either the uterus or the bladder. He decided at once to remove it, and this was done, after denuding it of its peritoneal covering. Drainage was then secured by means of a glass tube, and the patient made a good recovery. It is now five weeks after the operation, and there has been no return as yet of the pain or other troublesome symptoms; but he could not but feel somewhat apprehensive about the future. It seemed to him that the growth removed had been the original cause of the vaginal hernia.

In regard to the nature of the tumor, Dr. Thomas read the report made to him by Dr. H. C. Coe, pathologist to the Woman's Hospital. It was a soft, shapeless mass, $8\frac{1}{2}$ by $5\frac{1}{4}$ inches long, and $\frac{2}{3}$ to $\frac{4}{3}$ inch thick, the surface of which had a good vascular supply. On section, there was no sign of a cyst formation. After describing its microscopical structure, of which fibromuscular tissue formed a conspicuous element, Dr. Coe gave the following inferences: (1) It is not an organ, such as the bladder, for instance. (2) It is not an ovarian cyst. (3) It is not inflammatory tissue. He then stated that two theories had occurred to him as possibly accounting for the conditions found. The first was, that the tumor was an unusual growth of the pelvic connective tissue; and the second, that it was a softened uterine fibroid. The former supposition seemed to him the more likely to be correct.

Having finished the pathologist's report, Dr. Thomas referred to several cases of connective tissue growths, such as tumors of the broad ligaments, which had been reported by A. Martin, Schröder, and Hofmeier, the notes of which had been kindly collected for him by Dr. M'Cosh. In conclusion, he said:

Unfortunately, little can be said concerning the treatment of vaginal or vulvar hernia, for the reason that there is but one variety, the pudendal, which eventuates from inguinal hernia, for which very much can be done. That variety is amenable to treatment by the ordinary truss, as inguinal hernia is. The other varieties can, to a limited degree, be relieved by pessaries, hernial pads, abdominal bandages, etc.; but we are poor in methods of decided relief, and utterly wanting in those of cure. It appears to me that the plan suggested and partially carried out in the case which I have related, promises more than any other which has as yet been brought forward; but of the validity of this surmise, time and experience must give the proof. Certain I am, that if another case of large vaginal hernia presented itself, I should feel inclined to try laparotomy; dragging up the sac, and fastening it in the abdominal wound. B. Schmidt says, in Billroth and Pitha's *Handbuch*, that attempts were made by Huguier at radical cure of vaginal hernia, by an oval excision of part of the posterior vaginal wall and closure by suture, but without any lasting result. He must, indeed, be a sanguine surgeon who hopes for much from such procedures.

DR. F. A. CASTLE said that he had sometimes been struck with the curious contents of these hernial tumors. Thus, he had seen reported in the journals a case in which a portion of a catarrhal and dilated stomach was found in the sac.

CORRESPONDENCE.

RESECTION OF THE JAW FOR ANCHYLOYSIS.

To the Editor of THE MEDICAL NEWS.

SIR: In your recent review of the operation of excision of the condyle for ankylosis of the jaw, in the issue of November 21st, p. 573, you credit American surgery with three of the thirteen cases of which you find record. May I beg leave to call to your attention a case of my own in which a brilliant result was obtained. It was done December 10, 1879, and reported in full in the *New York Med. Journal* for April, 1880. I have seen the patient recently, five years after the operation, and the action of the jaw is absolutely perfect.

The only other case I know of, which also was omitted from your list, was done by the late Dr. James L. Little in 1873—and resulted equally well.

The entire neck of the condyle was excised in both cases, though by different incisions.

Very truly, your obedient servant,
ROBERT ABBE, M.D.

32 EAST TWENTIETH ST., N.Y.

NEWS ITEMS.

MONTREAL.

(From our Special Correspondent.)

SMALPOX.—The epidemic is almost at an end. During the last week the number of deaths from smallpox has been daily diminishing in the city proper. There have been very few new cases reported, and on some days no deaths at all. The suburbs are still suffering from the epidemic, and, not being under the jurisdiction of the city, decline to isolate cases or enforce vaccination. They have yet a daily mortality of from five to ten. The Board of Health have at last commenced to prosecute citizens refusing to be vaccinated. Several convictions have already been secured, and fines of twenty dollars have been imposed.

LONGUE POINTE ASYLUM.—This now notorious institution is again before the public as one of the few representatives of mediævalism. The conventional authorities not only believe they have special gifts fitting them for the treatment of the insane, but that their heavenly mission also extends to matters of hygiene and public health. It appears that, on the breaking out of the smallpox epidemic, some five months ago, orders were given by the Central Board of Health to have all the members of the Longue Pointe Asylum vaccinated. No notice was taken of this order. The government then directed Dr. Henry Howard, their visiting physician, to see that vaccination was thoroughly carried out. He went to the Asylum with his two assistants, but was refused admission by the Lady Superior, who told him that their own physicians were, under her direction, vaccinating the inmates. Nothing more was done. A few days ago a report spread abroad that smallpox had

broken out in the Asylum. This proved, on investigation, to be true; and quite a number of patients are suffering from the disease. There have already been several deaths; but, as the Asylum authorities refuse to give any information to the Board of Health, the number of cases and number of deaths are not known.

Dr. Howard visited the Asylum again last week with his assistants, for the purpose of vaccinating, but was again refused admission, but he insisted on examining the patients, and out of 274 examined he found that only 128 had been vaccinated. The Lady Superior said that many were not in a condition of health proper for vaccination.

The Lady Superior, in a letter to one of the papers, stated that as many as 600 of the 1200 inmates had been vaccinated, and that vaccination had been going on for several months past, and was still going on. The number of successful vaccinations was not stated. If it takes five months to vaccinate 600, how long will it take to vaccinate 1200? is a problem which it is not very difficult to solve. In the meantime the fact remains, that smallpox has broken out in the institution, and several deaths have occurred.

It is stated that the Board of Health intend to institute immediately legal proceedings against the Nuns of the Providence of St. Jean de Dieu in general, and the Lady Superior, Sister Theresa de Jesus, in particular. It remains to be seen whether a Society, which defies, not only the Devil and all his works, but the government and the Board of Health, will have the temerity to defy also the majesty of the law.

A LARYNGOLOGICAL SECTION OF THE NEW YORK ACADEMY OF MEDICINE.—A meeting called for the organization of this Section was held in the rooms of the Academy on the evening of December 23, 1885, the President of the Academy occupying the Chair. A valuable paper, entitled "The Surgical Uses of Electricity in the Upper Air-passages," was read by Dr. R. P. Lincoln, and was followed by an interesting discussion.

Dr. Rufus P. Lincoln was elected President, and Dr. S. Bryson Delavan Secretary of the Section for the ensuing year, and a general plan of organization adopted. The interest in the Section manifested by the members present gave gratifying assurance as to its future success.

THE PROPOSED INTERNATIONAL MEDICAL CONGRESS.—A press dispatch from Washington, dated December 29th, states that a physician of that city, now in Paris, writes to a friend deprecating the lack of harmony among members of the American Medical Association, and says that the controversies prevailing among the medical profession here are likely to make the international convention, which it is proposed to hold in Washington in 1887, a failure. The writer says: "The continued agitation and factional fight among the members of the American Medical Association are producing the most unfortunate results among the physicians and surgeons of Paris. Many have already concluded that the meeting of the International Medical Congress at Washington will not be largely attended, and consequently not a success, and have therefore determined not to make the long journey to America. It will re-

quire the greatest harmony of action, and often repeated assurances that no further difficulties remain to hamper or prevent the convening of the Medical Congress in 1887, to remove the bad impressions and opinions already formed."

A FRENCH VIEW OF THE INTERNATIONAL CONGRESS.—The following paragraphs conclude a lengthy editorial in *Le Progrès Médical*, of Dec. 12th, on the Congress embroil:

"What will be the result of this quarrel? Is it of a nature to compromise seriously the success of the Congress? If the sharpshooting which we have already described continues, it is very evident that the European physicians will hesitate considerably before crossing the Atlantic to accept the hospitality of a medical body so profoundly divided. It would be very desirable, from every point of view, that harmony of some sort should be established among our brethren of the United States. There are at stake the good fame of American physicians and the future of the medical relations between Europe and America. Indeed, the Congress of 1887 is called largely for the purpose of increasing these relations, and this to the mutual benefit of both continents.

"Passing over the material, economic side of the question, who can deny the civilizing effects of international medical congresses? They are to science what the international expositions are to commerce and the industries of nations. They multiply scientific relations, they make closer the bonds which unite *savants* of all countries, they aid in the diffusion of ideas and of discoveries; they do not simply mark steps of progress, they actually aid progress itself. It is for all these general reasons that we make an appeal for union and accord. It would be most grievous to record the abortion of the Congress at Washington, for the great American nation has all that is needed to give to this Congress a success and brilliancy equal, if not superior, to those of the older nations."

PRIZES OF THE FRENCH TEMPERANCE SOCIETY.—For the year 1886 no especial subject is obligatory, the requirement being that the essay presented shall bear upon some aspect of the subject of temperance in the use of alcohol. The essay is not rendered ineligible by having been previously published.

For the year 1887 the Society requires the presentation of a brochure to be called "The Mothers' Book: a manual for the use of women who desire to preserve their families from alcoholism." The prize offered is 1000 francs.

M. PASTEUR'S HYDROPHOBIA PATIENTS.—On Sunday, November 29th, a mad dog ran about the streets of a French village, and bit six people, including a police-sergeant. The preliminary precautions were taken, and the six patients were conveyed to M. Pasteur's laboratory. There are sixty-two people now under M. Pasteur's treatment; they have travelled from all parts of the world after reading his communication to the Académie des Sciences. We are authorized to state that M. Pasteur will receive for treatment any one who has been bitten by a mad dog, and is in danger of being seized by hydrophobia.

M. Gomot, the Minister of Agriculture, has officially visited the laboratory of M. Pasteur. He is so well satisfied with his visit that, it is announced, he will ask the Chambers to enable him to practise inoculation against rabies on a large scale, and to treat human beings suffering from that malady in a special hospital. About forty persons were under treatment when M. Gomot was at M. Pasteur's.—*British Med. Journal*, Dec. 12 and 19, 1885.

A NEW POSITION.—A young woman who recently received a medical degree in Paris, has been appointed medical examiner of girls in the Parisian municipal schools. Her duties are to see that the girls are not overworked, and that they accomplish their tasks under good sanitary conditions.

MIDDLEMORE OPHTHALMIC PRIZE.—The Middlemore ophthalmic prize of £50, offered by the British Medical Association, is again announced: "For the best essay on the scientific and practical value of improvements in ophthalmological medicine or surgery, made or published during the last three years."

NOTES AND QUERIES.

DR. ALBERT H. SMITH.

At the last meeting of the PHILADELPHIA CLINICAL SOCIETY the following resolution was unanimously adopted:

In view of the recent death of DR. ALBERT H. SMITH, a valued member of this Society, it is proper that we place on record our high estimate of his character and worth. Few men were more relied upon in our professional or personal relations. He was ever a counsellor upon whose judgment and support we relied; and his uprightness and learning lent weight to his opinions and advice.

Though precluded by sickness from an active participation in our later proceedings, yet his earnest sympathy with our objects was well known to us and highly prized.

His professional attainments will ever be both an example and a stimulus to us.

To his family we extend our tenderest and deepest sympathy.

Resolved, That this minute be entered upon our minutes, and a copy be sent to his family, and be published in THE MEDICAL NEWS.

IDA E RICHARDSON,
Corresponding Secretary.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM DECEMBER 22 TO DECEMBER 28, 1885.

FRYER, B. E., *Major and Surgeon*.—Sick leave extended six months on Surgeon's certificate of disability.—*S. O. 292, A. G. O.*, December 21, 1885.

VICKERY, R. S., *Major and Surgeon*.—Relieved from duty in Department of Columbia, to repair to Washington, D. C., and report in person to Surgeon-General for duty in connection with Army and Navy Hospital, Hot Springs, Ark.—*S. O. 293, A. G. O.*, December 22, 1885.

REED, W., *Captain and Assistant Surgeon*.—Leave extended one month.—*S. O. 293, A. G. O.*, December 22, 1885.

IVES, F. J., *Assistant Surgeon*.—Ordered to report to Commanding Officer, District of New Mexico, for duty in the field.—*S. O. 127, Department of the Platte*, December 23, 1885.

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course, not necessarily for publication.

All communications relating to the editorial department of the NEWS should be addressed to No. 1004 Walnut Street, Philadelphia.